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The International Journal of
INDIAN PSYCHOLOGY



Person of the Month
Jacques Lacan (1901-1981)

Editor in Chief:
Prof. Suresh M. Makvana, PhD
Editor:
Ankit P. Patel

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INDIAN PSYCHOLOGY

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Chief Editor

Prof. Suresh M. Makvana, PhD

Editor

Ankit P. Patel

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Message from the Desk of Editor

It gives me immense pleasure to welcome all to explore/publish/ comment in/on our journal, The International Journal of Indian Psychology (IJIP). There are a lot of challenges which the growing psychological face in the realms of basic necessities in life. Psychological thoughts can play a very distinct role in bringing about this change. One of the key objectives of research should be its usability and application. This journal attempts to document and spark a debate on the research focused on psychological research and ideas in context of emerging geographies. The sectors could range from psychological education and improvement, mental health, environmental issues and solution, health care and medicine and psychological related areas. The key focus would however be the emerging sectors and research which discusses application and usability in social or health context.

We intended to publish case reports, review articles, with main focus on original research articles. Over objective is to reach all the psychological practitioners, who have knowledge and interest but have no time to record the interesting cases, research activities and new innovative procedures which helps us in updating our knowledge and improving our treatment.

Finally, I would like to thank RED'SHINE International Publications, Inc for this keepsake, and my editorial team, technical team, authors and well wishers, who are promoting this journals. With these words, I conclude and promise that the standards policies will be maintained. We hope that the research featured here sets up many new milestones. I look forward to make this endeavour very meaningful.

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Person of the Month: Jacques Lacan (1901-1981)

Ankit Patel¹

Born	13 April 1901 Paris, France
Died	9 September 1981 Paris, France
Citizenship	French
Known for	Mirror phase, The Real, The Symbolic The Imaginary, Graph of desire
Fields	Psychoanalysis



Jacques Lacan, in full Jacques Marie Émile Lacan (born April 13, 1901, Paris, France—died Sept. 9, 1981, Paris) French psychoanalyst who gained an international reputation as an original interpreter of Sigmund Freud's work.

Lacan earned a medical degree in 1932 and was a practicing psychiatrist and psychoanalyst in Paris for much of his career. He helped introduce Freudian theory into France in the 1930s, but he reached prominence only after he began conducting regular seminars at the University of Paris in 1953. He acquired celebrity status in France after the publication of his essays and lectures in *Écrits* (1966). He founded and headed an organization called the Freudian School of Paris from 1964 until he disbanded it in 1980 for what he claimed was its failure to adhere with sufficient strictness to Freudian principles.

Lacan's avowed theoretical intention, from at least 1953, was the attempt to reformalize what he termed "the Freudian field." His substantial corpus of writings, speeches and seminars can be read as an attempt to unify and reground what are the four interlinking aspirations of Freud's theoretical writings:

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- a theory of psychoanalytic practice as a curative procedure;
- the generation of a systematic metapsychology capable of providing the basis for
- the formalization of a diagnostic heuristic of mental illness; and
- the construction of an account of the development of the "civilized" human psyche.

Lacan's failing health made it difficult for him to meet the demands of the year-long Seminars he had been delivering since the fifties, but his teaching continued into the first year of the eighties. After dissolving his School, the EFP, in January 1980, Lacan travelled to Caracas to found the Freudian Field Institute on 12 July. The Overture to the Caracas Encounter was to be Lacan's final public address. His last texts from the spring of 1981 are brief institutional documents pertaining to the newly formed Freudian Field Institute and Lacan died on 9 September 1981.

TIMELINE

1901

- Jacques-Marie-Émile Lacan is born in Paris, April 13, to a family of solid Catholic tradition. He is educated at the Collège Stanislas, a Jesuit school. He has a sister, Magdeleine-Marie and a younger brother Marc-Marie, who later becomes a Benedictine at the abbey of Hautecombe. His brother's name appears before those of his parents in his thesis dedication. After his baccalauréat he studies medicine and later psychiatry.

1927

- Starts clinical training, works at Sainte-Anne's hospital in the second section of women and in the Clinic for Mental and Encephalic Diseases directed by Professor Henri Claude. A year later he works in the Special Infirmary Service where Clérambault had a practice. Up to 1932 Lacan was involved in the Société Neurologique, the Société de Psychiatrie and the Société Clinique de Médecine mentale, he was fully integrated in the official circles of neurology and psychiatry.

1931

- Lacan presents some of his hypotheses at the Evolution Psychiatrique and publishes the following year in the *Revue française de psychanalyse* his translation of Freud's "On Some Neurotic Mechanisms in Jealousy, Paranoia and Homosexuality." Receives a diploma as a forensic psychiatrist. He publishes *Structure des psychoses paranoïaques*, *Semaine des Hôpitaux de Paris*, 7 July 1931.

1932

- Awarded doctorate for his thesis: *De la psychose paranoïaque dans ses rapports avec la personnalité*, Paris: Le Français, 1932. Later though (1975) he will state that paranoid psychosis and personality are the same thing. One name stands out by its absence from the list of dedication: that of Clérambault. It was because of their differences that Lacan failed his agrégation. At that time Lacan declares that in his thesis he was against "mental automatism," Clérambault's theory.

Person of the Month: Jacques Lacan (1901-1981)

1933

- Because of his thesis he becomes a specialist in paranoia. The richness of his text and the multiplicity of its aspects appealed to very different circles, especially the analysis of the case of Aimée make him famous with the Surrealists. Between this year and 1939, he takes Kojève's course at the Ecole Pratique des Hautes Etudes, an "Introduction to the Reading of Hegel." He publishes *Motifs du crime paranoïaque: le crime des soeurs Papin. Minotaure*.

1934

- He is appointed doctor of the Asiles, and marries Marie-Louise Blondin, mother of Caroline, Thibaut and Sibylle. While in analysis with Rudolph Loewenstein, Lacan becomes a member of La Société Psychoanalytique de Paris (SPP). Loewenstein is one of the four training analysts of the S.P.P. His analysis ends in 1939 with Loewenstein's departure to the war.

1938

- Becomes a full member of the SPP. Lectures at the S.P.P. on *De l'impulsion au complexe* where he argues for a "primordial structural stage" called "stage of the fragmented body in the development of the ego." At this stage "pure drives" (la pulsion à l'état pur) would appear in states of "horror" inseparable from a "passive beatitude." To defend his thesis, he presents two cases of patients at length. He publishes *La famille: Encyclopédie française*, Vol. 8.

1940

- Works at Val-de-Grâce, the military hospital in Paris. During the German Occupation, he does not partake in any official activity. "For several years I have kept myself from expressing myself. The humiliation of our time under the subjugation of the enemies of human kind dissuaded me from speaking up, and following Fontenelle, I abandoned myself to the fantasy of having my hand full of truths so as to better close it on them." In "Propos sur la causalité psychique," from 1946 and published in *Écrits*.

1947

- In 1946, the S.P.P. resumes its activities and Lacan, with Nacht and Lagache, takes charge of training analyses and supervisory controls and plays an important theoretical and institutional role. After visiting London in 1945 he publishes *La Psychiatrique anglaise et la guerre*, in *Evolution psychiatrique*1.

1951

- The S.P.P. begins to raise the issue of Lacan's short sessions, as opposed to the standard analytical hour. Lacan argues that his technique accelerates analysis. The underlying logic is that if the unconscious itself is timeless, it makes no sense to insist upon standard sessions. Lacan defends his use of short sessions a year later in *La psychanalyse, dialectique?*, unpublished.

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1952

- During this period of crisis at the S.P.P. (1951-52), the responsibility for the report on the 1953 conference in Rome "Fonction et champ de la parole et du langage" is assigned to Lacan. At the time he is considered to be the most productive and original theoretician of the group, all the more so because he always uses the classical terms of the Freudian orthodoxy when speaking within the S.P.P.

1953

- In his project for the statutes of the S.P.P. Lacan organizes the curriculum around four types of seminars: commentaries of the official texts (particularly Freud's), courses on controlled technique, clinical and phenomenological critique, and child analysis. A large amount of freedom of choice is left to students in training. In January Lacan is elected President of the S.P.P. Six months later he resigns to join the Société Française de Psychanalyse (S.F.P.) with D. Lagache, F. Dolto, J. Favez-Boutonier among others. (At S.F.P.'s first meeting, Lacan lectures on "Le Symbolique, l'Imaginaire et le Réel"). Nevertheless the S.F.P. is allowed to be present in Rome where Lacan delivers his report: "Fonction et champ de la parole et du langage," discourse in which, for once, remarks Lagache with humor, "he is in no way Mallarmean." On July 17 he marries Sylvia Maklès, mother of Judith. That Fall Lacan starts his seminars at the Hôpital Sainte-Anne.
- The Neurotic's Individual Myth: Psychoanalytic Quarterly, 1979.
- 1954The positive reception of the expression "the return to Freud" and of his report and discourse in Rome give Lacan the will to reelaborate all the analytical concepts. His critique of analytic literature and practice spares almost nobody. Lacan returns to Freud yet his return is a re-reading in relation with contemporary philosophy, linguistics, ethnology, biology and topology. At Sainte-Anne he held his seminars every Wednesday and presents cases of patients on Fridays.

1955

- Lacan will remain at Sainte-Anne till 1963. The first ten Seminars elaborate fundamental notions about psychoanalytic technique, the essential concepts of psychoanalysis, and even its ethics. Students give presentations yet it is the Tuesday night conferences that fed Lacan's commentaries on Wednesdays.
- Le séminaire, Livre II: Le moi dans la théorie de Freud et dans la technique de la psychanalyse, Paris: Seuil, 1978; The Seminar, Book II: The Ego in Freud's Theory and in the Technique of Psychoanalysis, 1954 - 55, New York: Norton, 1988.

1956

- "The flexibility of the S.F.P. increases Lacan's audience. Celebrities are attracted to his seminars (Hyppolite's analysis of Freud's article on Dénégation, given during the first seminar, is a well-known example). Koyré on Plato, Lévi-Strauss, Merleau-Ponty, Griaule, the ethnologist, Benvéniste among others attend his courses.

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- "Fetishism: The Symbolic, The Real and The Imaginary" (in collaboration with W. Granoff), in S. Lorand and M. Balint, eds., *Perversions: Psychodynamics and Therapy*, New York: Random House, 1956.

1957

- During this period Lacan writes, on the basis of his seminars, conferences and addresses in colloquia, the major texts that are found in *Écrits* in 1966. He publishes in a variety of journals, notably in *L'Évolution Psychiatrique*, which takes no account of the S.P.P. / S.F.P. conflict and *Bulletin de la Société de Philosophie*. J.B. Pontalis, Lacan's student, publishes with his consent the accounts of Seminars IV, V and VI in *Bulletin de Psychanalyse*

1958

- In the S.P.P. executive board, positions and titles are exchanged with perfect regularity until Serge Leclaire becomes secretary and then president. Yet Lacan emerges, if not the only thinker of the group, at least as the one who has the largest audience and the most audacity, especially since his practice of short sessions secures him the greatest number of analysts-in-training. A Lacan group begins to organize itself, identifiable by its language and its modes of intervention in discussions.

1959

- The first issue of *La Psychanalyse* from 1956 is entirely devoted to Lacan: it includes the Rome report and discourse with the discussions that followed with Lacan's response, the commentaries from Seminar I on Hyppolite's analysis of denegation and Lacan's translation of Heidegger's *Logos*. In a following issue Hesnard will comment on *Wo es war, soll Ich werden* that according to Lacan the "I" must come to the place where the id was: *là où était le "ça" "je" doit advenir*. This opposes the S.P.P.'s translation: "the ego must drive out the id."
- *Le séminaire, Livre VI: Le désir et son interprétation*, unpublished.

1960

- In his *Ethics* Lacan defines the true ethical foundations of psychoanalysis and constructs an ethics for our time, an ethics that would prove to be equal to the tragedy of modern man and to the "discontent of civilization" (Freud). At the roots of the ethics is desire: analysis' only promise is austere, it is the entrance-into-the-I, *l'entrée-en-Je*. "I must come to the place where the id was," where the analysand discovers, in its absolute nakedness, the truth of his desire. The end of psychoanalysis entails "the purification of desire." This text functions throughout the years as the background of Lacan's work.
- *Le séminaire, Livre VII: L'éthique de la psychanalyse*, Paris: Seuil, 1986. *The Seminar, Book VII: The Ethics of Psychoanalysis*, 1959-60, New York: Norton, 1992.

1961

- At the colloquium on dialectic organized by Jean Wahl at Royaumont the previous year, Lacan defends three assertions: psychoanalysis, insofar as it elaborates its theory from its praxis, must have a scientific status; the Freudian discoveries have radically changed the

Person of the Month: Jacques Lacan (1901-1981)

concepts of subject, of knowledge, and of desire; the analytic field is the only one from where it is possible to efficiently interrogate the insufficiencies of science and philosophy. This major intervention will appear in *Écrits* as "Subversion of the Subject and Dialectic of Desire in the Freudian Unconscious," where the subject of psychoanalysis is neither Hegel's absolute subject nor the abolished subject of science. It is a subject divided by the emergence of the signifier. As to the subject of the unconscious, it is impossible to know who speaks. It is "the pure subject of the enunciation," which the pronoun "I" indicates but does not signify. Yet the key concept is that of desire: "it is precisely because desire is articulated that it is not articulable in a signifying chain."

1962

- Meanwhile S.F.P. members want to be recognized by the I.P.A. At the Congress of Edinburgh in 1961, the I.P.A. committee recommends that the S.F.P. become a supervised study group of the I.P.A. Moreover, in a series of twenty requirements it asks the S.F.P. to ban Lacan (also Dolto and Bergé) from the analysts' training: the problem of the short sessions, which was already at stake during the first split, is back for discussion. Lacan did not "give in on his desire," and neither did the I.P.A. make concessions about its principles. He was not banned from psychoanalytic practice nor from teaching: he was denied the right to train analysts. Driven to choose between Lacan and affiliation with the I.P.A., Paris opts for the time being not to make any decision. Moreover, a motion is adopted by the Bureau of the S.F.P. stating that "any attempt to force the expulsion of one of its founder members would be discriminatory, and would offend against both the principles of scientific objectivity and the spirit of justice." Lacan and Dolto are elected president and vice-president.
- Later that year, Lacan is appointed chargé de cours at the École Pratique des Hautes Etudes (Paris) and a series director at Éditions du Seuil. The series will be known as *Le Champ freudien*: in time his Seminars and *Écrits* will be published in there.
- *Le séminaire, Livre IX: L'identification*, unpublished.

1963

- In January, Serge Leclaire succeeds Lacan as president of the S.F.P. In May, envoys from the I.P.A. visit Paris and meet with Leclaire. Not only they express doubts about Lacan's attitude towards Freud (he studies Freud's texts obsessively, in the manner of medieval scholar) they also claim that Lacan manipulates transference through the short session: he must be excluded from the training courses. At the Congress of Stockholm, in July, the I.P.A. votes an ultimatum: within three months Lacan's name has to be crossed off the list of didacticians. Everything is organized to reorient his students in training analysis towards other analysts, thanks to a committee supervised by the I.P.A. Two weeks before the expiration of the deadline fixed by the I.P.A. (October 31), Lagache, Granoff and Favez advance a motion calling for Lacan's name to be removed from the list of training analysts: the committee of didacticians of the S.F.P. gives up its courageous

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position of 1962. On November 19 a general meeting has to make a final decision on I.P.A.'s conditions regarding Lacan. Lacan then writes a letter to Leclaire announcing he will not attend the meeting because he can foresee the disavowal. Thus, on November 19, the members' majority takes the position in favor of the ban. As a result of it Leclaire and Dolto resign from office. During the night Lacan learns the decision made at the meeting: he no longer is one of the didacticians. The next day, his seminar on "The Names-of-the-Father" is to start at Sainte-Anne: he announces its end. Fragments of it are published in *L'excommunication*

1964

- Lacanians form a Study Group on Psychoanalysis organized by Jean Clavreul, until Lacan officially founds L'École Française de Psychanalyse. Soon it becomes L'École Freudienne de Paris (E.F.P.). "I hereby found the École Française de Psychanalyse, by myself, as alone as I have ever been in my relation to the psychoanalytic cause." The E.F.P. is organized on the basis of three sections: pure psychoanalysis (doctrine, training and supervision), applied psychoanalysis (the cure, casuistics, psychiatric information), and the Freudian field (commentaries on the psychoanalytic movement, articulation with related sciences, ethics of psychoanalysis).
- With Lévi-Strauss and Althusser's support, he is appointed lecturer at the École Pratique des Hautes Etudes. He begins his new seminar on "The Four Fundamental Concepts of Psychoanalysis" in January in the Dussane room at the École Normale Supérieure (in his first session he thanks the generosity of Fernand Braudel and Claude Lévi-Strauss).
- Le séminaire, Livre XI: Les quatre concepts fondamentaux de la psychanalyse, Paris: Seuil, 1973. The Seminar, Book XI: The Four Fundamental Concepts of Psychoanalysis, New York: Norton, 1981.

1965

- Having founded his own école, Lacan's renown increases considerably in his new settings at the rue d'Ulm. He keeps presenting cases of patients at Sainte-Anne; members of his école work and teach in Paris in hospitals such as Trousseau, Sainte-Anne and Les Enfants Malades; and others join universities or hospitals in the provinces (Strasbourg, Montpellier, Lille). In his seminars he explains his project to teach "the foundations of psychoanalysis" as well as his position within the psychoanalytic institution. His audience is made of analysts but also of young students in philosophy at the E.N.S., notably Jacques-Alain Miller, to whom Althusser assigns the reading of "all of Lacan" and who actually does it. It is him who asks Lacan the famous question: "Does your notion of the subject imply an ontology?"
- Le séminaire, Livre XII: Problèmes cruciaux pour la psychanalyse, unpublished.

1966

- Lacan wants to continue to train analysts, his first priority. Yet, at the same time, his teaching is addressed to the non analysts, and thus he raises these questions: Is psychoanalysis a science? Under what conditions is it a science? If it is-the "science of

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the unconscious" or a "conjectural science of the subject"-what can it, in turn, teach us about science? *Cahiers pour l'Analyse*, the journal of the Cercle d'Épistémologie at the E.N.S. is founded by Alain Grosrichard, Alain Badiou, Jean-Claude Milner, François Regnault and Jacques-Alain Miller among others. It publishes texts by Lacan in three of its issues that very year. In July Judith Lacan marries Jacques-Alain Miller.

- *Écrits*, Paris: Seuil, 1966. *Écrits, A Selection*, New York: Norton, 1977. The French version immediately became a best-seller and draws considerable public attention to the école far beyond the intelligentsia.
- *Le séminaire, Livre XIII: L'objet de la psychanalyse*, unpublished.

1967

- Lacan states in the *Acte de Fondation* that he shall undertake the direction of the école during the four years, "a direction about which nothing at present prevents me from answering." In fact Lacan remains its director until the dissolution in 1980. He divides the école into three sections: the section of pure psychoanalysis (training and elaboration of the theory, where members who have been analyzed but haven't become analysts can participate); the section for applied psychoanalysis (therapeutic and clinical, physicians who have neither completed nor started analysis are welcome); the section for taking inventory of the Freudian field (it concerns the critique of psychoanalytic literature and the analysis of the theoretical relations with related or affiliated sciences). To join the école, the candidate has to apply to an organized work-group: the cartel.
- "Proposition du 9 octobre 1967 sur le psychanalyste à l'Ecole," *Scilicet* 1.
- *Le séminaire, Livre XIV: La logique du fantasme*, unpublished.

1968

- The novelty of the proposition of 1967 lies in the modification of access to the title of Analyst of the École (A.E.), a rank superior to that of Member Analyst of the École (A.M.E.). The analysts appointed as A.E. are those who have volunteered for the *passee* and have come victorious out of the trial. The *passee* consists of testifying, in front of two *passseurs*, to one's experience as an analysand and especially to the crucial moment of passage from the position of analysand to that of analyst. The *passseurs* are chosen by their analysts (generally analysts of the école) and should be at the same stage in their analytic experience as the *passant*. They listen to him and then, in turn, they testify to what they have heard in front of a committee for approval composed of the director, Lacan, and of some A.E. This committee's function is to select the analysts of the école and to elaborate, after the selecting process, a "work of doctrine."
- *Le séminaire, Livre XV: L'acte psychanalytique*, unpublished.

1969

- The issue of the *passee* keeps invading the E.F.P.'s life. "Le quatrième groupe" is formed around those who resign from the E.F.P. disputing over Lacan's methods for the analysts' training and accreditation. Lacan takes a stand in the crisis of the university that follows May 1968: "If psychoanalysis cannot be articulated as a knowledge and taught as such, it

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has no place in the university, where it is only a matter of knowledge." The E.N.S. director, Flacelière, finds an excuse to tell Lacan that he is no longer welcome at the E.N.S. at the beginning of the academic year. Moreover, Cahiers pour l'Analyse has to stop its publication, but Vincennes appears as an alternative. Michel Foucault asks Lacan to create and direct at Vincennes the Department of Psychoanalysis. Lacan suggests that S. Leclaire, rather than himself, should undertake the project. Classes start in January. Thanks to Lévi-Strauss Lacan moves his seminars to the law school at the Panthéon.

- Le séminaire, Livre XVI: D'un Autre à l'autre, unpublished. In there Lacan argues that "the Name-of-the-Father is a rift that remains wide open in my discourse, it is only known through an act of faith: there is no incarnation in the place of the Other."

1970

- In his seminar L'envers de la psychanalyse Lacan establishes the four discourses: Master's, university's, hysteric's and the analyst's discourse. He discusses the Father of Totem and Taboo who is all love (or jouissance) and whose murder generates the love of the dead Father, a figure to whom he opposes both the Father presiding over the first idealization and the Father who enters the discourse of the Master and who is castrated from the origin. "The death of the father is the key to supreme jouissance, later identified with the mother as the aim to incest." Yet psychoanalysis is not constructed on the proposition 'to sleep with the mother' but on the death of the father as primal jouissance. The real father is not the biological one but he who upholds "the Real as impossible." In "Radiophonie," Scilicet 2/3, Lacan argues that "if language is the condition of the unconscious, the unconscious is the condition of linguistics." Freud anticipated Saussure and the Prague Circle by sticking to the letter of the patient's word, to jokes, to slips, by bringing into light the importance of condensation and displacement in the production of dreams. The unconscious states that "the subject is not the one who knows what he says." Whoever articulates the unconscious must say that it is either that or nothing.
- Le séminaire, Livre XVII: L'envers de la psychanalyse, Paris: Seuil, 1991.

1971

- One novelty in Lacan's teaching is his return to the hysteric with Dora and la Belle Bouche erre (the Beautiful Mouth wanders and an allusion to the beautiful butcher's wife analyzed by Freud and carried on in La direction de la cure Three questions: the relation between jouissance and the desire for unfulfilled desire; the hysteric who 'makes the man' (or the Master) insofar as she constructs him as "a man prompted by the desire to know;" a new conception of the analytic treatment as a "hysterization of discourse."
- Le séminaire, Livre XVIII: D'un discours qui ne serait pas du semblant, unpublished.

1972

- As to Lacan "in psychoanalysis (as well as in the unconscious) man knows nothing of woman, and woman nothing of man. The phallus epitomizes the point in myth where the sexual becomes the passion of the signifier." For him the structure is the body of the symbolic: "there is no sexual rapport, implies no sexual rapport that can be formulated in

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the structure." There is "no appropriate signifier to give substance to a formula of sexual rapport."

- "L'étourdit" Scilicet 4.
- Le séminaire, Livre XIX: ... ou pire, unpublished.

1973

- In Encore Lacan argues that woman would only enter in the sexual rapport quoad matrem (as a mother) and man quoad castrationem (phallic jouissance). Hence there is no real rapport and love as well as speech make up for his absence. And he adds: "There is woman only as excluded by the nature of words,...for man she is on the side of truth and man does not know what to do with it." In Le savoir psychanalytique from 1972, Lacan argues: "I am not saying that speech exists because there is no sexual rapport. I am not saying either that there is no sexual rapport because speech is there. But there is no sexual rapport because speech functions on that level that analytic discourse reveals to be specific to speaking human beings. The importance, the preeminence of what makes sex a semblance, the semblance of men and women. Between man and love, there is woman; between man and woman, there is a world; between man and the world, there is a wall. What is at stake in a serious love relationship between a man and a woman is castration. Castration is the means of adaptation to survival."
- Le séminaire, Livre XX: Encore, Paris: Seuil, 1975. The Seminar, Book XX: On Feminine Sexuality, the Limits of Love and Knowledge: Encore, New York: Norton, 1998.

1974

- The Vincennes Department of Psychoanalysis is renamed "Le Champ freudien;" Lacan, director, and Jacques-Alain Miller, president. In Télévision, Paris: Seuil, (the text is based on a broadcast on the ORTF produced by Benoît Jacquot) Lacan makes his famous statement: "I always speak the truth. Not the whole truth, because there's no way to say it all. Saying it all is materially impossible: words fail. Yet it is through this very impossibility that the truth holds to the real." Television, New York: Norton, 1990.
- Le séminaire, Livre XXI: Les non-dupes errent, unpublished.

1975

- Lacan travels to the United States where he lectures at Columbia University (Auditorium, School of International Affairs), general discussion at Yale University (Kanner Seminar and Law School Auditorium) followed by another general discussion at the Massachusetts Institute of Technology.
- Le séminaire, Livre XXII: R.S.I. in Ornicar?

1976

- Lacan posits that the notion of structure does not allow to create a common field uniting linguistics, ethnology and psychoanalysis. Linguistics has no hold over the unconscious because "it leaves as a blank that which produces effects in the unconscious: the objet a, the very focus of the analytical act, and of any act. "Only the discourse that is defined in

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the terms of psychoanalysis manifests the subject as other giving him the key to his division, whereas science, by making the subject a master, conceals him to the extent the the desire that gives way to him bars him from me without remedy." There is only one myth in Lacan's discourse: the Freudian Oedipus complex.

- Le séminaire, Livre XXIII: Le sinthome, in Ornicar?

1977

- Le séminaire, Livre XXIV: L'insu que sait de l'une bévue s'aile à mourre, in Ornicar?

1978

- Le séminaire, Livre XXV: Le moment de conclure. One session only published as "Une pratique de bavardage," Ornicar?

1979

- Le séminaire, Livre XXVI: La topologie et le temps, unpublished.

1980

- On January 9, Lacan announces the dissolution of the EFP in a letter addressed to members and published in Le Monde. He asks those who wish to continue working with him to state their intentions in writing. He receives over one thousand letters within a week. On February 21, Lacan announces the founding of "La Cause freudienne." In July he attends an international conference in Caracas. "I have come here before launching my Cause freudienne. It is up to you to be Lacanians if you wish; I am Freudian."
- Le séminaire, Livre XXVII: Dissolution, in Ornicar?

1981

- September 9, Lacan dies in Paris.

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A Study on Intelligence and Mental Stress among Students of UAS, Raichur

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ABSTRACT

The present study on intelligence and mental stress among students was conducted during 2015-16 at College of Agriculture and College of Agricultural Engineering, University of Agricultural Sciences, Raichur. A total of 185 undergraduate and post graduate students were the respondents selected for the study. The ex post facto research design was employed in the study. The data was collected from the students personally using a standardized interview schedule developed for the study. The collected data was analyzed using appropriate statistical tools. The results of the study revealed that, more than one third (38.92 %) of the respondents belonged to medium category with respect to socio economic status, equal per cent (35.14 %) of the respondents belonged to medium and low stress categories, forty per cent of the respondents belonged to medium intelligence category. Achievement motivation and education status exhibited positive and significant relation with the intelligence level at 1 per cent level of probability. Education and management orientation exhibited significant and negative relationship with the stress level among the students. Whereas, achievement motivation exhibited negative and significant relationship with stress.

Keywords: *Association, Intelligence, Socio-economic status and Stress*

Intelligence in the 21st century takes place in an extraordinarily complex environment. Recently intelligence is playing a vital role in every institution. It is an umbrella term used to describe property of mind that encompasses many related abilities, such as planning, decision making skills, problem solving approaches to think abstractly, to comprehend idea, to use language to learn in some cases intelligence includes traits such as creativity, personality, knowledge, etc however intelligence agreed upon a majority across the various concerned disciplines. Like mental ability, mental health is also an important component for development of individual.

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In modern life every person has his or her own level of tolerance vis-à-vis mental stress and among various stress seems to be the most prevalent today. The turning of 21st century adolescents mental and emotional health has become a great issue of concern for psychologists, counselors, and health professionals. Stress can overtake our adjective capacity as its affects our moods, impair our ability to experience pleasure and harm to the body. It can be in the form of tension in the family, urban living condition and students education etc,. In our present semester system students are facing one or the other mental stress problems ie, attending classes, examinations, assignments and co-curricular activities etc, So, caring and protecting adolescents there is a need for assessing their level of mental stress and advising good suggestions for improving and cope up with mental stress.

OBJECTIVES

1. To study the socio-economic profile of the students.
2. To asses the level of Intelligence of the students.
3. To study the level of mental stress among students.
4. To ascertain the relationship between socio- economic profile of students with level of intelligence and mental stress.

METHODOLOGY

The present study on intelligence and mental stress among students was conducted during 2015-16 at College of Agriculture and College of Agricultural Engineering, University of Agricultural Sciences, Raichur. The undergraduate and post graduate students were the respondents selected for the study. The total sample comprised of 185 UG and PG students of both the colleges. The expost facto research design was employed in the study. Standard scales were used to measure the stress and intelligence. The data was collected from the students personally using a standardized interview schedule developed for the study. The collected data was analyzed using appropriate statistical tools.

RESULTS AND DISCUSSION

Socio economic status

It is clear from the results presented in table 1 that, more than one third (38.92 %) of the respondents belonged to medium category with respect to socio economic status followed by low (31.89 %) and high (29.19 %) socio economic status categories respectively. This might be due to varied socio-economic background of the students. Joseph *et al* (2015) conducted a study on assessment and determinants of emotional intelligence and perceived stress among students of a medical college in south India and reported that, three-fourth of them belonged to middle SES.

Stress among students

The results in table 2 depict the distribution of respondents according to their stress. As indicated in table 2, equal per cent (35.14 %) of the respondents belonged to medium and low stress

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categories followed by high (29.73 %) category. Iqbal *et al* (2015) reported that, 13.1 per cent of the medical undergraduates had severe or extremely severe stress and the mean scores of stress for all students were found to be at mild level. Joseph *et al* (2015) also reported that, of the total number of participants, 12 (3.0%) perceived low, 201 (49.5%) perceived average, and 193 (47.5%) perceived high levels of stress.

Intelligence

It is evident from the results presented in table 3 that, forty per cent of the respondents belonged to medium intelligence category followed by high (30.81 %) and low (29.19 %) intelligence categories. Joseph *et al* (2015) reported that, of the total of 406 students, 41 (10.1%) were found to have high, 354 (87.2%) average, and 11 (2.7%) poor emotional intelligence scores.

Association between selected variables

With respect to association between selected socio economic characteristics of the students and intelligence level of students, achievement motivation and education status exhibited positive and significant relation with the intelligence level at 1 per cent level of probability. Whereas, management orientation exhibited positive and significant relationship at 5 per cent level of probability. Prabha (2015) also reported that, significant relationship/correlation between academic achievement and emotional intelligence among first year degree students in Puducherry.

With regard to association between selected socio economic characteristics of the students and stress level of students, education and management orientation exhibited significant and negative relationship with the stress level among the students. Whereas, achievement motivation exhibited negative and significant relationship with the stress. Iqbal *et al* (2015) also reported that, students who were satisfied with their education had lower depression, anxiety and stress scores.

CONCLUSION AND IMPLICATIONS

It is clear from the results that majority of the undergraduate and post-graduate students belonged to low and medium level of stress. Majority of them belonged to medium intelligence level. Education and achievement motivation of the students exhibited positive and significant relationship with the intelligence level of the students. Whereas, education and management orientation exhibited negative and significant relationship with the stress level. Hence, there is a need to conduct personality development programs for the benefit of the students. There is a need to establish college wise counseling centers to conduct regular counseling for the students.

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Table 1: Distribution of students according to their SES status (N=185)

Sl.No	Category	Frequency	Percentage
1	Low(mean-0.425*SD)	59	31.89
2	Medium(mean-0.425*SD)	72	38.92
3	High(mean-0.425*SD)	54	29.19

Table 2: Distribution of students according to their Stress status (N=185)

Sl.No	Category	Frequency	Percentage
1	Low(mean-0.425*SD)	65	35.14
2	Medium(mean-0.425*SD)	65	35.14
3	High(mean-0.425*SD)	55	29.73

Table 3: Distribution of students according to their intelligence (N=185)

Sl.No	Category	Frequency	Percent age
1	Low(mean-0.425*SD)	54	29.19
2	Medium(mean-0.425*SD)	74	40.00
3	High(mean-0.425*SD)	57	30.81

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Autism Spectrum Disorder-Impact on Parenting & Coping Strategies

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ABSTRACT

The purpose of this study is to determine what kind of impact the diagnosis of ASD can have on parents and what can be done to decrease the amount of stress these parents experience. Within recent decades the chances of a child being diagnosed with autism spectrum disorder has increased dramatically. Some believe this is due to the increased recognition of an autism spectrum disorder in doctors as well as parents/caregivers, teachers and other individuals that may work with children. Autism spectrum disorder (ASD) is a group of developmental disabilities that can cause significant social, communication and behavioural changes. There is no known cause and no cure for ASD. A two year old child, who appeared to be developing normally, fails to develop language, shows little interest in other people, and engages in repetitive behaviours. Parents begin a journey into the world of autism, navigating through the diagnostic process while trying to understand why their child is no longer developing normally. This paper gives a brief history of ASD, identifies the main characteristics of ASD, identifies suspected causes, explores the sense of loss and grief parents often may experience, discusses parental stress, coping strategies, the special challenges faced while parenting a child with ASD and positive personal growth parents may experience because of the child's ASD. Through parent interviews, it was evident ASD added stress to the families. It is the parent's ultimate decision on what they consider is a comfortable means of coping. There was a consensus that parents would like to talk to others who have experience in ASD - whether it is professionally or personally.

Keywords: *Autism Spectrum Disorder, Parenting, Coping Strategies*

The word autism is derived from the Greek word autos meaning self. According to the Oxford English Dictionary, the term was first used and defined in the 1912 American Journal of Insanity in reference to “instances where thought is divorced both from logic and from reality” (O'Brien

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&Daggett, 2006, page 5). Autism is a lifelong neurological condition, a developmental disorder that typically occurs in the first three years of life. Autism appears as differences in development in three main areas: communication (verbal and non-verbal), social interactions and imagination, which can be seen in repetitive and restricted play or leisure activities. This is referred to as the triad of impairments. Autism is known as a '**spectrum disorder**' because the severity of symptoms can range from a mild learning and social disability, to more complex needs with multiple difficulties and often very unusual behaviour. Autism results in qualitative impairments. This means that in a person with autism, skills are present (not absent) but do not develop age appropriately. Therefore different skills develop at a different pace in different people with autism. Autism is referred to as a spectrum disorder because children can have a wide range of symptoms or characteristics that affect them that range from mild to severe (Willis, 2006). The disease is found to be four times more prevalent in males than females.

India is home to about 10 million people with autism and the disability has shown an increase over the last few years. According to statistics by the Centre for Disease Control and Prevention (CDC), one in every 88 children today is born with autism spectrum disorder (ASD) against a ratio of one in 110 few years back. Although it has been described as an epidemic, ASD is neither contagious nor a disease. When looking at ASD statistics it is necessary to understand the difference between prevalence and incidence. The CDC states that prevalence indicates the number of individuals within a certain population who are diagnosed with a specific disorder; incidence refers to the number of new cases of a disorder or condition that occurs over a specific period of time, usually one year. Knowing the prevalence of a disorder allows professionals to estimate the types and amount of services a specific group will require. The prevalence of ASD has risen over the last 30 years in part due to it now being recognized in the Diagnostic Statistical Manual of Mental Disorders (DSM) as a specific disorder with established criteria. Wing (2005) suggests that the rising number of children being diagnosed with ASD is due in part to the broadening of the diagnostic criteria, development and use of standardized diagnostic instruments, and an increased awareness of the disorder. A number of standardized diagnostic instruments have been developed in the last 30 years. In order for a child to be diagnosed with autism, Frith (2003), states all three of the following symptoms must be observed in the child before age three.

1. There must be qualitative impairment in reciprocal social interactions relative to developmental level. Behavioural signs include poor use of eye gaze and of gestures; lack of personal relationships.
2. There must be a qualitative impairment in verbal and nonverbal communication relative to developmental level. Behavioural signs include delay in the acquisition of language, or lack of speech; lack of varied, spontaneous make-believe play.
3. There must be markedly restricted repertoire of activities and interests appropriate to developmental level. Behavioural signs include repetitive or stereotyped movements, such as hand flapping; interests that are abnormally intense or abnormally narrow.

Autism Spectrum Disorder-Impact on Parenting & Coping Strategies

When people think about ASD, most people think about the child who is affected by it. They may think about these children from that specific child's point of view and how they are perceived by others or what it would be like to not communicate effectively with others. Does anyone think about the parents of these children? The parents of children with ASD are often overlooked because everyone is focused on making the child "better." An article by McHugh, Osborne, Reed, and Saunders (2008, p. 1092) stated that, "levels of stress experienced by the parents of children with ASD are enormously high, compared to those experienced by parents of children with almost any other type of disability or health problem." Parents of children with ASD often go through an emotional rollercoaster after learning the initial diagnosis. Parents go from thinking their child is perfect, to having an incurable disorder that will affect nearly every aspect of their child's life. An expert in the field of autism (Pullen, 2009, p. 14) stated that, "many parents of children with autism have trouble coping with their own personal needs, let alone the many needs of their child with autism." There is evidence that a child with ASD can stress the marital relationship and decrease marital satisfaction (Rivers & Stoneman, 2003).

The parents of three-year old Mohit have just heard that he has been diagnosed with ASD - this would be the initial stressor. After going through the initial shock of hearing their son's diagnosis, Mohit's parents immediately began looking for ways to make him "normal." First, they made a decision as to which early intervention program they want him to begin which added more stress because they wanted nothing but the best for their son. Early intervention programs are services provided to children with disabilities to help in the development of language, motor skills, and socialization. At the same time, their family budget had just begun getting a little tighter due to the added cost of some of Mohit's ASD treatments. Having monetary issues is an additional stressor which led to marital distress between Mohit's parents. The addition of marital stress was another stressor added to the family. Reducing the amount of stress parents experience when they have a child with ASD is important to ensure a healthy family environment. Through the interview process, parents will share information about their child's diagnosis, their emotions, what caused them stress and the ways they are coping with the stress. From this information, we will be able to examine and share ways to help these parents cope and determine helpful ways in which they can reduce the amount of stress they have experienced.

Because ASD is being diagnosed more frequently, parents need to be aware of what resources are available to them. When given appropriate resources, parents should be able to handle the diagnosis of ASD in a more effective and positive way. Special education professionals and health care professionals who have specialized in ASD should serve as a vital Support system for these families. The society we live in should also be taken into consideration when thinking of solutions to help these families that have a child with ASD. "When a child is diagnosed with a disability, you would expect society to rush in and help. But that doesn't happen," (Koegel & LaZebnik, 2004,). There should be more people willing to learn about ASD and accept it for what it is. Along with this, people should spread awareness and advocate for ASD services to

show families affected by ASD their Support and acceptance. By taking advantage of the provided help, families of children with ASD will feel the support they need from their doctors, teachers, and the rest of the society so their whole family can be brought up in a healthy, loving and caring household. Using the information from existing research and parent surveys will make it clearer as to what kind of support families are looking for and need.

Autism Spectrum Disorder (ASD)

Autism spectrum disorder can be described as a complex developmental disorder that affects one's ability to socialize, communicate, and respond to his or her environment and is typically diagnosed before the age of three (Willis, 2006). Benson (2006, p. 685) states, "One of the most severe disabilities affecting young children is autism, a disorder that adversely affects nearly every aspect of the child's development." The word autism was first used by Leo Kanner to describe a group of children he was observing (Koegel & LaZebnik, 2004). The word autism means "alone" and the group of children Kanner had observed had a preference to be alone (Koegel & LaZebnik, 2004). The words "spectrum disorder" has been added onto the term "autism" because children can have a wide range of symptoms or characteristics that affect them that range from mild to severe (Willis, 2006). A parent of a child with ASD and author (Notbohm, 2005, p. xix), stated that, "No two children with autism will be completely alike. Every child will be at a different point on the spectrum."

Characteristics of autism spectrum disorder

There are many different characteristics that can be used to describe how ASD affects children. Some of these characteristics include: a delay in communication and social interaction, obsessions over specific objects, repetitive body movements, and having specific routines and rituals which they obsessively follow throughout their day (Willis, 2006). More specifically, the American Psychiatric Association's Diagnostic and Statistical Manual of Mental Disorders (2000) stated that an individual must meet at least six of the developmental and behavioral characteristics from the list before the age of three with no evidence for other conditions that are similar. This list of diagnostic criteria includes three broad developmental and behavioural areas including:-

- 1) Impairments in social interaction;
- 2) Impairments in communication; and
- 3) Restricted repetitive and stereotyped patterns of behaviour, interests and activities.

When diagnosing a child who shows characteristics of this complex disorder, one must decide to what extent the specific ASD characteristic affects the child so they can determine where he or she falls on the spectrum (Koegel & LaZebnik, 2004). The diverse characteristics of ASD may have profound effects on the parents of children with ASD."Parents and clinicians agreed that communication impairment, uneven cognitive abilities, and problems in social relations were the autism-related symptoms that were most stressful for mothers and fathers of school-aged

children". (Carter & Davis, 2008, p. 1279). In a similar article, Botts, Hoffman, Hodge, Lopez-Wagner, Nam and Sweeney (2008, p. 155) state, "Behavioural symptoms associated with children's autism including their language and communication difficulties, cognitive impairments, reactivity to frustration, and repetitive, self-stimulatory behaviour, have been found to be related to parents' stress."

Emotional Effects the Diagnosis of ASD Has on Parents

After the initial diagnosis of ASD, parents must learn how to cope with all the changes that are occurring within their family. Davis, Rosswurm and Zane (2008,) found that, "parenting children with developmental disabilities is associated with impaired mental health, higher levels of stress, a sense of devaluation and blame, and impaired physical functioning such as tiredness or exhaustion." Experts on the treatment of autism (Koegel & LaZebnik, 2004,) said, "Over the years, I have talked with thousands of parents of children with autism, and I can tell you that getting the news is horrific, terrifying, stressful and, depressing." After parents hear their child will no longer be developing like a typically developing child, there is no doubt they would experience a great amount of emotion.

Stages of grief

Dr. Elisabeth Kubler-Ross provided pioneering work to understand death, dying, and grief (Gibson, 2004). She then developed the five stages of grief as: denial, shock anger, bargaining/guilt, depression, and acceptance (Gibson, 2004). Parents often go through their own stages of grief after hearing their child has ASD because it is an unexpected change in their lives. Parents with disabled children present higher levels of dysphoria, intense anger, guilt, depression and anxiety (Davis, Rosswurm & Zane, 2008). People experience the stages of grief differently because there is no sequential order in which each stage should occur and because some people may not experience some of the stages (Gibson, 2004).

Depression

Parents of children with ASD may also experience depression. In fact, depression is common in parents of children with ASD (Koegel & LaZebnik, 2004). Ericzen, Frazee-Brookman and Stahmer (2005) reported that "Mothers of children with autism report higher levels of depression compared to mothers of children without autism." Another author (Benson, 2006) states, "One problematic mental health outcome commonly linked to the demands of parenting a child with autism is depression." Benson (2006) also states, "The high level of depression suggests parents of children with ASD are at increased risk for poor mental health outcomes, not only because of the demands of caring for their child with ASD, but because of other stressors which may be engendered or exacerbated by their child's disorder. " The length of depression experienced by parents differs from one parent to another. "Nothing is more depressing than uncertainty and inactivity" (Koegel & LaZebnik, 2004, p. 17).Autism spectrum disorder is full of uncertainty - whether or not treatments will work and if they do, when will they begin to show results. When

parents become depressed, it is not only detrimental to themselves, but also to their family. "Depression leads to inactivity and withdrawal from society; it will damage you, your marriage, and your children" (Koegel & LaZebnik, 2004).

Stress Experienced by Parents of Children with ASD

Many parents of children with ASD experience stress one way or another. An article by Benson (2006) stated, "Autism's impact on the family appears to be particularly severe, with parents of children with autism frequently reporting high levels of stress associated with their child's social and communicative deficits, problem behaviours, and level of dependency". Mothers and fathers of children with disabilities tend to stress about different things. Mothers tend to stress about providing appropriate care for their child, whereas fathers tend to stress about the financial toll ASD puts on their income (Koegel & LaZebnik, 2004). Parents with children who have ASD may struggle getting through daily routines and may need to make personal sacrifices, while balancing a family life, spousal relationships and job obligations because their child was affected by ASD. That is a great deal of stress for one person to handle. Pullen (2009) reported that, "Many parents of children with autism have trouble coping with their own personal needs, let alone the many needs of their child with autism". Benson (2006) sums up his findings by saying, "Parent well-being can be both directly and indirectly affected by their child's ASD, with stressors expanding and crossing into areas of the parent's life not directly related to their child's autistic disorder."

Marital stress on parents

There is evidence that a child with ASD can stress the marital relationship and decrease marital satisfaction (Rivers & Stoneman, 2003). "Parents of children with ASD report more symptoms of anxiety and marital dissatisfaction than parents of children with other types of disabilities" (Bedesem, Boyd & Mancil, 2009). After hearing the initial diagnosis, parents will often times play the "blame game" in which parents go back and forth blaming each other for things that they may have done to cause their child's ASD.

Coping Strategies for Parents of Children with ASD

With all the stress of raising a child with autism, parents need ways to cope. Strategies that may be used by parents to cope may include autism support groups to hear from other parents in similar situations, reaching out for support from family and friends, taking parenting classes to learn ways to help their child grow and learn, or seeking professional help to talk about the changes happening in one's family. A study by Bedesem, Boyd and Mancil (2009) resulted in learning that the following strategies were most effective when coping with stress: social support, family support, religion, parent training, social withdrawal and professional help. A study by Hevey, Honan and Tehee (2009) reported the top facilitators of stress relief for parents included: school staff and services, respite services, family and spouses. From both studies, it is clear that both formal and informal coping strategies are important.

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Ultimately, it is the parent's decision on how they choose to deal with the stress of having a child with ASD. "Parents struggling with their own emotional difficulties may have fewer coping resources and feel more stressed by their children's challenging behaviors" (Carter & Davis, 2008, p. 1280). Similarly, no two children with ASD will be the same and no two parents are going to express the same emotions and have the same coping strategies. Hevey, Honan and Tehee (2009) stated, "Certain personality traits may be more conducive to adaptive coping than others."

Support from family and friends

Receiving support from family and friends may be the cheapest and most accessible support parents can get. As stated by an expert (Siegel, 2008) in the field of autism: Reaching out for support from your existing network is really important. Research shows maintaining the fabric of the life you had before diagnosis is more important to your longer-term well-being than forsaking it in favor of life as an autism-only mom or dad. Support from family and friends is considered to be an effective coping mechanism for dealing with the daily stress of rearing a child with autism (Bedesem, Boyd & Mancil, 2009).

Parenting classes

Some parents find relief by taking classes to help them understand and interact with their child more effectively. "Parent education programs that teach parents naturalistic strategies to increase their child's communication have been shown to result in decrease levels of parent stress and depression" (Baker-Ericzen, Brookman-Frazee & Stahme). Disadvantages that come with parenting classes may include availability and access of classes, paying for the classes or finding time to attend the classes.

Professional help

Willis (2006) describes what parents need after hearing their child's ASD diagnosis: "A strong support system that includes specialists such as early interventionists, special education teachers, speech pathologists, and occupational therapists." All the support systems mentioned by Willis are examples of professional help. Having this kind of support can help parents cope by meeting their emotional, practical and informational needs (Hevey, Honan & Tehee, 2009).

MATERIALS AND METHODS

The focus of this study is on parents of children with ASD in New Delhi and how they have responded to their child's diagnosis of ASD. Therefore, the sample used in the study included five parents whom all have a child with ASD and at least one other child. Specifically, five mothers participated in the interviews. Two fathers were present during the interviews, but contributed minimally compared to the mothers. The parents were between the ages of 28 and 45 and had at least two children, one of which has ASD. The ages of the children with ASD and the amount of time that has passed since they had been diagnosed with ASD was taken into

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consideration. There were no restrictions on the age and gender of the parents chosen for the sample.

Data Collection

The instrument used to gather data from the sample for this particular study was a set of Interview questions. The interview questions included items such as: general information about the child, the parent's reaction after hearing the initial diagnosis of ASD, if/how ASD has changed the parent's lives, the amount of stress (if any) that was experienced after the diagnosis, and if stress was experienced, methods that were used to cope with the stress. The interview included 38 items.

Data Analysis

The information obtained from the responses helped determine what the major causes of stress were for a parent who has a child with ASD, to what extent the stress affected parents and how parents prefer to cope with the stress. To protect the identities of the families involved, pseudonyms were used.

Table-1 Demographic Data

Questions	Parent Responses				
	1 st	2 nd	3 rd	4 th	5 th
Age of child	7	8	6	8	9
Age of children at which Diagnosed with ASD	2 Years 8 Months	3 Years 4 Months	2 Years 11 months	2 Years	3 years
Age of other Child	9 Years	4 Years	3 Years	11 Years	13 Years
Gender of Child with ASD	Male	Male	Female	Male	Male

Table-2 Diagnosis Questions

Questions	Parent Responses				
	1 st	2 nd	3 rd	4 th	5 th
Did you know anything about ASD prior to your child's diagnosis	Nothing	Knew it had something to do with socialization	Knew nothing, but had heard about it.	Yes	Not Much

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Questions	Parent Responses				
	1 st	2 nd	3 rd	4 th	5 th
Did You go through the stages of grief?	Yes - shock, guilt, anger	Yes- denial, guilt, anger	Yes - shock denial, guilt, anger & depression	Yes - shock! Denial, anger & acceptance.	Yes- Depression, Shock &Guilt
Do you feel anything positive came out of hearing your child's diagnosis	No	No	No	Yes	No
What was the worst part of hearing your child's diagnosis	God has punished us for our faults in this way	Knowing that he may not do things that other children would do	Knowing he would not have a normal life.	Knowing their child is one of 36 grandchildren with special needs	Who will take care of him after us
When did you realize your child may not be developing typically	1 Year 2 months. He was not talking	2 Years 9 months. Did not communicate with us	2 Years. Doctor realized she was not reaching his developmental benchmarks. B	1 Year 4 months. began to flap hands & did things repetitively	2 Years 7 Months. Doctor suspected something, but didn't know what.

Table-3 Life after Diagnosis

Questions	Parent responses				
	1 st	2 nd	3 rd	4 th	5 th
How do your other children currently feel about their sibling with ASD	He is just her brother, she doesn't know anything different.	He is too young to understand.	He is too young to understand	She is protective for him	He is more nurturing for him
What was the first kind of treatment your child received	Early Childhood program.	Nothing	Training in a special school	Early Childhood program.	Training in a special school

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Questions	Parent responses				
	1 st	2 nd	3 rd	4 th	5 th
Did your parenting ways change after you learned your child had ASD? If so, how?	Yes, they changed the way they interacted with him	Not really, just looked at ways to handle his self-esteem	Yes, they changed the way they communicated with him	Yes, motivated us for acceptance.	Yes, they changed the way they communicated with him as well as their environment

Table-4 Current Living Situation of the families

Questions	Parent Responses				
	1 st	2 nd	3 rd	4 th	5 th
Has ASD affected your family financially	Yes	Yes	Yes	No	Yes
Do you and your spouse work?	Yes	No	No	Yes	No
Has your child's ASD affected your relationship with your Spouse	Yes	No	Yes	No	Yes
In what ways has ASD affected you?	Mentally, Physically	Mentally, Physically, Economically	Emotionally, Economically, Mentally	Emotionally, Mentally	Emotionally, Physically Economically
Did ASD make your life more stressful? Parent	Yes	Yes	Yes	Yes	Yes
What has ASD taught you as a parent? As a member of our society?	Patience, tolerance of others	Parents of children with special needs are very involved with their child's School	Acceptance of other children with special needs.	Understanding of those who are different.	Patience
What is one thing you wished everyone knew about ASD	Individuals with autism are not unloving or lacking in emotion and empathy.	A child with ASD is first and foremost a child	It is a disability and not a disease.	To not be afraid to ask questions	Families of children with autism don't want pity – we need compassion.

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Table-5 Child with ASD

Questions	Parent responses				
	1 st	2 nd	3 rd	4 th	5 th
What do you feel your child's weaknesses	Communication, short attention span & not being social	Being impulsive, constant talking & being short tempered	Communication, learning slowly & understanding emotions.	Difficulty expressing empathy in ways that others expect or understand	. Thinking about things more generally or that aren't in the here and now
What is your child's emotional makeup like	Usually calm	Very happy unless he is told no and can be easily frustrated.	she might lack, or seem to lack, empathy with others	Rarely shows any emotions.	Usually calm, less something sets him off
What is the biggest improvement your child has made since a diagnosis has been made	Writing skills, Less concern for what others may think of them	Speech, eating habits, self-stims has ended	Loyalty, Honesty	Non-judgemental listening	Cognitive skills are improving & he knows his personal information.
What are your dreams and aspirations for your child	Hopes he becomes independent and successful in whatever he does	That he has exploded through any and all perceived limitations since the day that she was born.	Hopes she will have true friends and become independent	That he is HAPPY. God, please, just let him be HAPPY.	Hopes he will live independently and as normal as he can and have friends.

CONCLUSION

This Paper clearly illustrates how ASD affects the lives of parents. Each part of the parent interview added to the bigger picture of the impact ASD has on parents. In addition, clear Representations of the parent's responses to pertinent interview questions were defined through Brief summaries of how the parents responded as well as through the use of tables. Having a child with ASD is a life altering. It can change how parents identify themselves, determine

where and when they are able to go places, affect their friendships, change their social life, and affect career decisions. It alters relationships with partners or spouses and affects siblings. Every parent reacts differently to their child's diagnosis of ASD. All parents go through an "adjustment" period where they are unsure of exactly what their child having ASD indicates for the child's and their future. Parents must strike a balance between doing what is best for their child while also creating a sense of normalcy for others in the family.

Parents are faced with an ambiguous loss when a child is diagnosed with ASD. There is no closure and each day brings new challenges for parents. Boss (1999), says it well when she states: "Ambiguous loss is the most devastating because it remains unclear, indeterminate"

DISCUSSION

Challenges When Parenting a Child with ASD

Parents consistently stated that social support was crucial to coping with their child's ASD. Ironically, social support is often lost due to the behaviours exhibited by a child. Society's intolerance combined with the parent's feelings of being judged as poor parents often caused parents to withdraw from activities outside the home. Parents identify four characteristics related to the child's ASD that make parenting particularly challenging:

1. The child's unpredictable, inappropriate and destructive behaviours.
2. The child's need for sameness and routine.
3. Difficulties relating to the child's ability to process sensory stimuli.
4. The child's inability to communicate and lack of emotional bonding

Finding childcare for a child with ASD can be challenging. The more severe the Behaviours the child exhibits, the less likely the parents are to find someone willing to take on the childcare challenge (Stillman, 2005). Parents, particularly mothers, may be unable to return to work because childcare centers refuse to take the child. Although facilities may not have a specific policy in regards to ASD children, they will want to meet the child and observe him in the day care setting before agreeing to allow the child to attend. A child's behaviours related to having ASD can cause the greatest amount of anxiety and distress for parents. When the child's behaviours are unacceptable to friends and extended family members parents feel inadequate and feel they are judged to be poor parents

Coping Strategies Used by Parents

Just as each child with ASD is unique, so too is each parent's response to the ASD diagnosis. Parents coping strategies may be affected by a number of factors including: religious beliefs, level of education, financial status, cultural norms, and living in a rural vs. urban area. Resolved parents are able to put aside questions of causation, accept the child's abilities and limitations, and look at the benefits in the situation while still acknowledging the difficulties they face. Unresolved parents, especially, feel the child's diagnosis has produces negative feelings about

one's abilities as a parent, and have a negative view of their prospects for the future. Milshtein et al. (2009) observed parents falling into one of three categories: feeling oriented, action oriented, or thinking oriented. In the feeling oriented group parents found that talking about their feelings openly relieved the stress and they took comfort in the emotional support they received from friends and family. Action oriented parents were interested in finding answers and taking charge. Thinking oriented parents focused on finding more information related to working through problems; they became active in support groups, had a realistic attitude toward their child's abilities, and were strong advocates for their child.

Obrien and Daggett (2006) describe three ways parents respond emotionally when their child is diagnosed with an ASD: (a) focus on what might have been; (b) focus on what could be; (c) focus on what is.

Parents, especially mothers, may have to re-evaluate career goals due to their child having ASD. Parents found that by placing less emphasis on career and more emphasis on parenting and family they had a greater ability to enjoy life and felt less stress related to parenting a child with ASD (Tunali & Powers, 2002). Families who demonstrated resilience had a greater ability to cope with their child's ASD. Resilience is the capacity to endure adversity while becoming stronger and more resourceful as a result. It took, on average, two years from the time of initial diagnosis of the child's ASD until a family felt they had adjusted to the demands and changes related to parenting the child. Parents who utilized social support, positive reframing, emotional regulation, and compromise coping skills reported having a positive daily mood, less stress, and fewer feelings of depression. Parents who chose blaming, worrying, and withdrawal as coping strategies reported a negative outlook, higher levels of daily stress, and increased feelings of depression and sadness. Problem-focused coping was found to both positively and negatively affect daily mood. This may be due in part because many of the challenges parents face related to their child's ASD are not able to be changed.

How parents cope with the diagnosis and emotional issues varies, but consistently parents report a strong social support network is a necessary part of being able to cope (Gray, 2006, Altieri & Von Kluge, 2009.) Parents who were involved in support groups, had a strong sense of faith and spirituality, and a supportive extended family rated felt better able to cope and also reported having a higher degree of satisfaction with their lives.

Before being diagnosed with ASD, all of the parents described different situations that made them think their child was not developing typically. Parents began to notice their children were developing differently between the ages of a year and a year and a half. After hearing the diagnosis, the parents felt many different emotions. Though it gave some parents a sense of relief, hearing the official diagnosis was inevitably depressing. Two of the parents felt sadness when they thought about their child not being able to live a normal life.

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The interviewed parents were asked to describe their experiences of going through the stages of grief. All of the parents did not go through all the stages of grief nor did the parents experience the stages of grief in the same order.

All parents experienced shock and anger. These two emotions can be closely related because parents were shocked to find out something was wrong with their child and then angry because they wondered why this would happen to their child. After coming to terms with diagnosis, the two parents who accepted the diagnosis felt as though their child was just their child and they were not going to let a label take that away from them. The parent who has yet to accept the ASD diagnosis found herself researching ASD to find ways to help her son.

After hearing the diagnosis of their child, two out of three of the parents claimed to have made changes in their life. They acknowledged making changes to the way they interacted and communicated with their child with intentions of their child learning from their actions. One mother said they had changed their environment to make it less cluttered, safer and more child friendly. There was one parent who said they did not make any significant changes within their household.

Negative coping through withdrawal, escape, blaming, and feeling helpless were used more by mothers than fathers (Pottie & Ingram, 2008). Fathers reported that it was difficult for them to maintain personal friendships and felt this led to their feeling depressed (Teehee, Honan, & Hevy, 2009). However it should also be noted that fathers did not view the child's ASD as being as life changing as mothers did (Milshtein et al., 2009).

As awareness of ASD increases, hopefully society will take a more compassionate look at the child and the parents, be more accepting and willing to accommodate, and not so quick to judge the parents by the child's behaviours.

RECOMMENDATIONS

Researching information about different coping strategies within the literature review as well as interviewing parents about their preferred coping strategy proved that all parents cope with their stress in different ways. In the end, it is the parent's ultimate decision on what they consider is a comfortable means of coping. From the parent interviews, it was apparent there was a need for some sort of coping strategies. There was a consensus that parents would like to talk to others who have experience in ASD - whether it is professionally or personally. With this information established, parents of children with ASD need better access to support groups and professional help. The next logical step is to establish contacts to make these ideal coping strategies accessible to all families in need. From there, parents would be able to take advantage of speaking with others who have experience with ASD.

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Effect of Socio Economic Status on Academic Performance of Secondary School Students

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ABSTRACT

Aim: - The most important task of the educational system is to prepare students to acquire knowledge and career and cognitive skills to enter the community. Therefore, identifying the factors leading to the students' academic achievement is very important. The present study aimed to investigate the relationship between socio economic status and academic achievement of secondary school students belonging to different educational zones of Ganderbal district of Jammu and Kashmir State. **Methods:** - This descriptive analytical study was done on 120 students of secondary Schools in 2012-13 through random sampling. Socio economic status scale constructed and standardized by Rajbir Singh et al., and Previous Academic Progress Record from schools were used to collect data. Data were analyzed by using Mean, S.D, M.D and students t-test. **Results:** - Result proves it beyond any shadow of doubt that there is a significant difference in the academic achievement of high socioeconomic status of students in comparison to low socioeconomic status of students. Significant differences were found between the students with (high and low) and (high and middle) socioeconomic status. On the other hand insignificant difference was found between the students with middle and low socioeconomic status in respect to academic achievement.

Keywords: Parental Socio-economic Status, Academic Performance, Secondary school students.

Socioeconomic status is the blend of economic and sociological measures of an individual work experience and the economic and social position of an individual or family in connection to others on the premise of income, educational level and occupational status. For the investigation of a family socioeconomic status, the household income, education of earner and occupation are checked and in addition consolidated wage contrasted and a person, when their own attributes are assessed. Socioeconomic status is by and large partitioned into three categories i.e., high

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socioeconomic status, middle socioeconomic status and low socioeconomic to clarify the three fields a family or an individual may fall into. At the point when putting a family or individual into one of these classifications, any or the majority of the three variables i.e., income, education, and occupation can be investigated and evaluated.

The obligation of training a child always lies in the hand of the parents. This is harmonious with the regular attestation sociologist that education can be an instrument of social change which is being taught from home is important in this talk about. It is not strange to envision that parental socio economic foundation can effect sly affect the academic achievement of children in school. At all influence the advancement environment of youngsters would perhaps influence their training or attitude to it. Parental status is one of such variables.

Socio economic status of parents do not only affect the academic performance, but also makes it possible for children from low background to compete well their counterparts from high socio economic background under the same academic environment (Rothstein, 2004). Education is a tool of development. It widens minds, recognizes good and bad, makes us to segregate well from terrible and uses out environment to the best of our capacity for the improvement of a person and in addition the group (Sabzwari, 2004).

Rich source of literature is available which highlights the impact of socio economical status on academic performance like Suleman *et al.*, (2012) who found that children with strong socioeconomic status show better academic performance in comparison to those with poor socioeconomic status, they showed poor and unsatisfactory academic performance. Saifi (2011) investigated the effect of socioeconomic status on student's performance. Results revealed that parental education and occupation and facilities at home affect the student's achievement. Eamon (2005) revealed that students whose parental socioeconomic status is low do not show effective performance in school. Findings also showed that the academic achievement of students is negatively correlated with the low parental socioeconomic status level as it prevents the individual in gaining access to sources and resources of learning.

Problem: -

- To investigate the effects of parental socioeconomic status on the academic achievement of secondary school students.

OBJECTIVES

1. To see the relationship between the socioeconomic status of the parents and the academic performance of their children's.
2. To find out the effect of socioeconomic status on the academic performance of secondary school students.
3. To see the difference on academic achievement of students between high and low socioeconomic status.

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4. To see the difference on academic achievement of students between middle and low socioeconomic status.
5. To see the difference on academic achievement of students between high and middle socioeconomic status.
6. To suggest workable recommendations for the enhancement of the students academic performance.

Hypotheses

- H1- There would be significant difference on academic achievement of students between high and low socioeconomic status.
- H2- There would be significant difference on academic achievement of students between middle and low socioeconomic status.
- H3- There would be significant difference on academic achievement of students between high and middle socioeconomic status.

Variables:

In the present study the investigator takes three independent variables viz sex (male & female), area (rural & urban) and socio economic status. Academic achievement is dependent variable.

Sample:

The sample for the present study consisted of 120 secondary school students selected through random sampling technique from 12 higher secondary schools on different educational zones of Ganderbal District in J&K State.

Measuring Tools:

Socio-Economic Status Scale Standardized by Rajbir Singh *et al.*, and Previous Years Academic Progress Report were used to collect data.

Statistical Treatment:

The data collected was analyzed by Mean and S.D. and t-test was used for hypotheses testing.

RESULTS

The main purpose of the present study was investigating the effects of parental socioeconomic status on the academic achievement of secondary school students. For this purpose investigator formulated 3 different hypotheses. Results are shown in below given tables besides it graphical representation of the mean scores is also mentioned.

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Table-1, Showing Mean, Standard Deviation, Mean Difference, and t value of High and Low Socioeconomic Status

Students	N	Mean	S.D	M.D	df	t- value
High SES	40	67.52	16.86	9.36	78	2.47*
Low SES	40	58.16	16.99			

*significant at 0.05 level

Graph-1 Graphical representation of mean scores of High and Low Socioeconomic Status

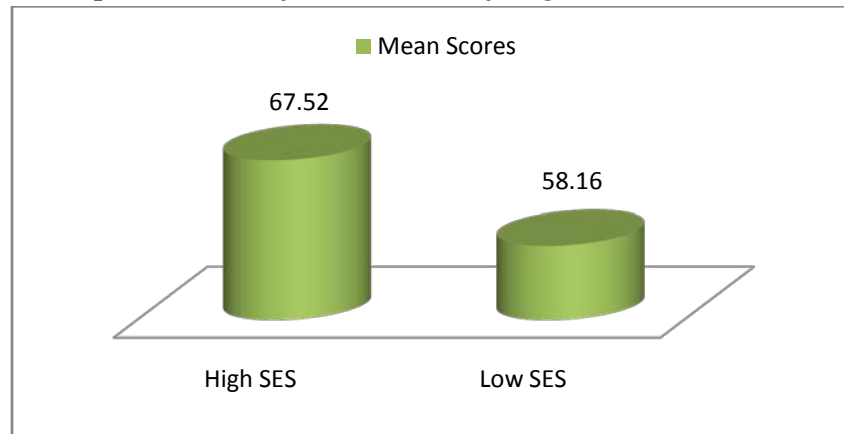
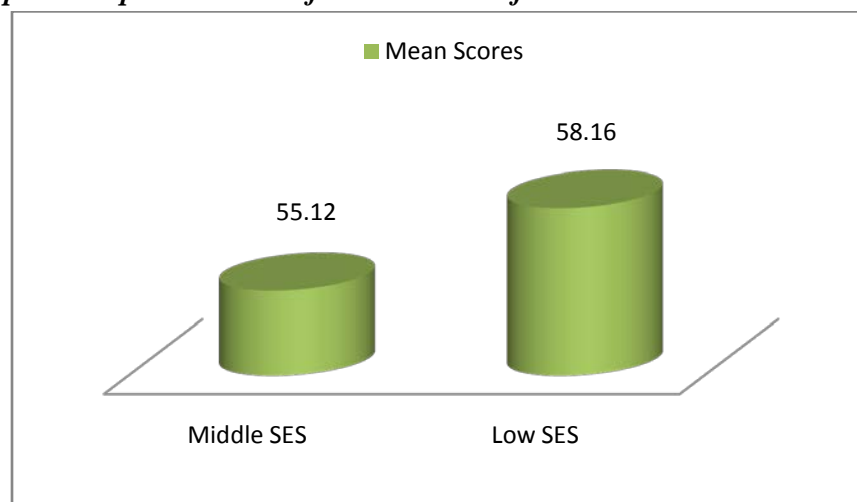


Table-2, Showing Mean, Standard Deviation, Mean Difference, and t value of Middle and Low Socioeconomic Status

Group	N	Mean	S.D	M.D	df	t- value
Middle SES	40	55.12	10.05	3.03	78	0.97
Low SES	40	58.16	16.99			

Graph -2, Graphical representation of mean scores of Middle and Low Socioeconomic Status



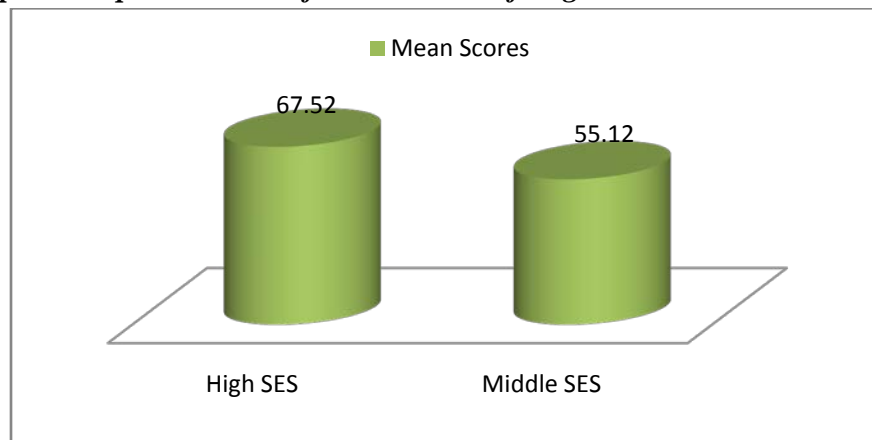
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Table-3, Showing Mean, Standard Deviation, Mean Difference, and t value of High and Middle Socioeconomic Status

Group	N	Mean	S.D	M.D	df	t- value
High SES	40	67.52	16.86	12.39	78	3.99**
Middle SES	40	55.12	10.05			

**significant at 0.01 level

Graph-3, Graphical representation of mean scores of High and Middle Socioeconomic Status



DISCUSSION

The mean, S.D and M.D of high and low socioeconomic status in respect to academic achievement of students (shown in table-1) was found [(M= 67.52, 58.16), (S.D=16.86, 16.99) and (M.D=9.39)] respectively. The obtained t-value (2.47/78) was found more than tabulation value at 0.05 (1.99) level of significance. Thus our findings suggests that students with high socioeconomic status have high academic achievement than students with low socioeconomic status on the basis of our findings we can say our first hypothesis (*There would be significant difference on achievement of students between high and low socioeconomic status*) is accepted.

Our 2nd hypothesis (*There would be significant difference on academic achievement of students between middle and low socioeconomic status.*) is rejected as the obtained t-value (0.97/78) was found insignificant at 0.05 (1.99) level of significance. The obtained mean scores of students from the families with middle socioeconomic status was found (55.12) which is less than mean scores (58.16) of students from the families with low socioeconomic status. Similarly the S.D and M.D of the same group was found [(S.D=16.86, 16.99) and (M.D=9.39)] respectively.

The final hypothesis of the present study (*There would be significant difference on academic achievement of students between high and middle socioeconomic status.*) is also accepted as the obtained t-value (3.99/78) was found significant at 0.01 (2.63) level of significance. The obtained mean scores of students belongs to high socioeconomic status was found (67.52) which is more than mean scores (55.12) of students belongs to middle socioeconomic family. Similarly

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the S.D and M.D of the same group was found [(S.D=16.86, 10.05) and (M.D=12.39)] respectively. Thus the results of the present study reveal that students with high socioeconomic status have high academic achievement than students with middle socioeconomic status.

CONCLUSION

To sum up, taking into account the findings of the present study, we might conclude that socioeconomic status is the significant factors in academic achievement.

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Effects of Materialism on Well-Being: A Review

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ABSTRACT

Materialism as a research topic has gained currency for over past two decades. Studies reveal that in consumer societies, people are trying to capture happiness and satisfaction in the form of possession of luxury goods. Materialism is characterized by a pursuit of wealth taking precedence over higher level needs. Well-being is a comprehensive term for the psychological, physical, social, or economic state of an individual or group. The researchers have found evidence to support the belief that materialism shares a negative relationship with wellbeing. Several researches have documented that materialistic lifestyle is allied with low subjective well-being. In light of past researches, this paper attempts to review the literature to trace this relationship between these two variables. The overall argument of the paper is that materialistic tendencies are detrimental to the well being of an individual. The paper concludes with the research directions to carry the research on materialism and well being forward.

Keywords: *Materialism, Well Being, Happiness, Life Satisfaction*

“It is the preoccupation with possessions, more than anything else that prevents us from living freely and nobly.”

Bertrand Russel (‘Principles of social reconstructions, 1916).

In consumer societies, material goods are considered an index of happiness and success (Garðarsdóttir & Dittmar, 2012). Consumers are consuming today more than they ever have before (Van Boven & Gilovich, 2003). Research evidence demonstrates that materialistic values have risen dramatically in last few decades, (Astin et al. 2002; Ger & Belk, 1999). It is a widely held belief in consumer societies that materialism is good for the economy of the nation, since materialism pushes people to work more to secure higher incomes, to increase consumption of goods and services and promotes living standards (Kasser et al., 2007; Richins & Rudmin, 1994). Material possessions are socially meaningful not only owing to their instrumentality in sustaining and developing our lives but also because they are used as the symbols of identity, personality and self-expression (Dittmar & Pepper, 1994; Dittmar, 1992; Burroughs et al., 1991; Kamptner,

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1991). It is a matter of growing concern that materialism is distracting the individuals, especially the youth, from self-development and responsibilities they owe to their community (Csikszentmihalyi, 1999).

Critiques attack marketing and advertising for causing affluenza (de Graff et al., 2005). Affluenza, a term coined from affluence and influenza highlights the excessive craving for material possessions. De Graaf et al. (2001) define it as a ‘painful, contagious socially-transmitted condition of overload, debt, anxiety, and waste resulting from the dogged pursuit of more’. Consumption is interlinked with the creation and production of a sense of self as possessions help us convey our connection to others and express who we think we are (McCracken, 1986; Levy, 1981). Brewer and Porter (1993) observed that our lives today are overloaded with the material objects which bring with them their prospects as well as the problems.

Social thinkers link materialism with the squandering away of valuable resources, deterioration of traditional religious values, and also the breakdown of civic responsibility (Schudson, 1991). It has become an activity that they engage in to cater to their hedonistic needs (Ramnathan & Menon, 2006; O’Cass & McEween, 2004; Faber & O’Guinn, 1989). Some look at their new purchases as a means to fill a void in their lives (Diener et al., 1993; Belk, 1985). The notion that consumer goods are a sure-shot to success, identity and happiness is the core value of a consumer society (Dittmar & Drury, 2000). Dittmar (2007) maintained that material possessions have acquired a disproportionate focus in the lives of individuals in the consumer societies. In a capitalist society, human beings are consumers by nature (Solomon et al., 2004).

Researchers have been trying to understand the influence of Terror Management Theory on consumer behavior (Fransen et al., 2008; Arndt et al., 2004; Rindfleish & Burroughs, 2004). The value individuals ascribe to consumer items seems to change owing to terror management processes. For example, death reminders make long-term status items such as investments etc. more desirable. In a study conducted by Fransen et al. (2008), the results revealed that when reminded of death, people buy items that are valued in their cultures. Globalization is another great force behind the current consumer trends. It is manifested in the form of global flows across the world. Appadurai (1990) maintained that there are five types of global flows –

- mediascapes (image and communication),
- ethnoscapes (tourists, migrants and foreign students),
- ideoscapes (political ideas and ideologies),
- technocapes (technology and know-how), and
- finanscapes (capital and money).

Craig et al. (2009) maintain that cultural products and lifestyles from the developed world are spreading across developing countries through traditional and social media, and is influencing

consumer tastes, shopping preferences and purchase behavior of consumers (Douglas & Craig, 1997). This phenomenon also seems to be changing the fabric of societies as lifestyles, products, and rituals of one culture are being absorbed into and adopted by another culture (Craig et al., 2009, Craig & Douglas, 2006).

The cultures with individualism and materialism as their defining qualities affect well-being through their influence on values. Defining values, it can be said that they are a core component of a culture, the characteristics of a society and its institutions, as well as of its people (Eckersley, 2005; 2001). The cultural significance of goods is evident from their ability to take upon a meaning through their use as markers of that culture (Dittmar, 1992).

Materialism

Materialism has gained widespread attention across the globe for its far reaching and rather gripping effects on the consumer psyche. It can be defined as “the importance ascribed to the ownership and acquisition of material goods in achieving major life goals” (Richins, 2004). Acquisition desires can be traced back to early civilizations (Belk, 1985). Noting the importance of materialism, Twitchell (1999) stated, “of the 20th century’s various–isms, it has been the one that has ultimately triumphed”. Dittmar et al. (2014), in a meta-analysis defined materialism as the long-term endorsement of materialistic values, goals or beliefs which revolve around acquiring money and possessions that convey status.

The word “materialism” finds its roots in philosophy (Micken and Roberts, 1999). It is the philosophical conceptualization that nothing exists except matter and its movement (Scott, 2009). A highly materialistic individual believes that the acquisition of material goods is central to happiness and self-definition, and an indicator of success (Richins & Dawson, 1992).

Materialism serves as a topic of research in different disciplines and is defined from different perspectives as a way of life, as a value orientation, a cultural system, a personality trait, a second order value, and as an aspiration (Bindah & Othman, 2011). Belk (1984) defines materialism as ‘the importance a consumer attaches to worldly possession’. It is conceived as a complex trait which reflects the centrality which an individual ascribes to possessions (Belk, 1985). Richins and Dawson (1992) identified three dimensions to materialism: centrality, happiness, and success. Richins and Dawson (1992) suggest that materialism is a value. A value is “a belief that a specific mode of conduct is personally or socially preferable to other beliefs and that it has a transcendental quality that guides actions, attitudes, judgments, comparisons across specific objects and situations, and beyond immediate goals” (Richins & Dawson, 1992).

Wiedmann et al. (2009) defined materialism as the degree to which individuals find possessions to play a central role in their life. Individuals higher on materialism are more likely to acquire

possessions, to have positive attitudes towards acquisition, and to assign a higher priority to material goods (Wiedmann et al. 2009). Researchers maintain that materialism as a phenomenon is bound to grow in all cultures irrespective of the type of the economies, even in the lack of material goods (Ger and Belk, 1996; Parker et. al., 2010) and it will also grow when material goods are available in abundance (Schaefer et al., 2004). Richins (1994a, 1994b) argued that the individuals high on materialism choose possessions that are publicly visible and prominent and bring them prestige. These individuals are also strongly influenced by the opinions of others when selecting products. Researchers observed that materialism exhibits a positive relationship with the preference for goods that symbolize prestige and social status (Prendergast & Wong, 2003; Holt, 1998; Wong & Ahuvia, 1998). Materialism is a socio cultural (Ghadrian, 2010; Schor & Holt, 2000) as well as an individual phenomenon (Lim et al., 2012; Chang & Arkin, 2002; Kasser, 2002; Larsen et al., 1999).

Well Being

Well-being is a comprehensive term for the psychological, physical, social, or economic state of an individual or group (Scott et al., 2014; Diener 2009; Malhotra 2006; Sirgy & Lee 2006). A major proposition in psychology is that wellbeing is not simply the lack of mental illness (Seligman & Csikszentmihalyi, 2000). Seligman (2011), in his PERMA model of flourishing, defined psychological well-being in terms of five domains: positive emotions (P), engagement (E), relationships (R), meaning (M), and accomplishment (A). *Positive emotions* refer to feelings of happiness, *engagement* means feeling psychologically connected, invested in activities, *relationships* implies the feeling of being connected and supported by others, *meaning* refers to the feeling that one's life is meaningful, valuable, and feeling connected to something greater than oneself, and *accomplishment* refers to having a sense of achievement and making progresses.

Researchers have proposed that well-being be characterized as a combination of indicators across multiple domains, rather than as a single factor (Organisation for Economic Co-operation and Development, 2014; Forgeard et al., 2011; Frey & Stutzer, 2010; Lerner et al., 2009; Keyes, 2007; Ryff & Keyes, 1995). Baumeister et al. (2013) propose that Subjective Well Being is happiness, which is 'an experiential state of positive affect'. They are of the view that subjective well being can be measured in two different ways i.e. affect balance and life satisfaction.

Subjective well being is defined as an individual's cognitive and affective assessments regarding their life satisfaction (Diener, 1984). Diener et al. (2006) aver that subjective well-being is one's evaluations of their own lives, which can comprise their judgments about their life satisfaction and evaluations based on personal feelings. Diener (2006) says that subjective well being is an umbrella term encompassing negative and positive evaluations made by an individual about their life satisfaction, engagement and affect. Research evidence suggests that subjective well being is contingent upon life satisfaction including positive and negative affect (Robbins & Kliewer, 2000; Lightsey, 1996).

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There are two top-down and bottom-up factors important to subjective well being (Diener, 1984). Diener et al. (1999) list bottom-up factors such as external events, situations, and demographics whereas top-down factors include individual factors (e.g. values and goals) which trigger external events that influence well-being (Diener et al., 1999).

Three different approaches to define subjective well being capture different aspects- life evaluation, hedonic well being and eudemonic well being (Kahneman et al., 2003). Life evaluation implies an individual's perception of quality of his/her life or overall life satisfaction (Cantril, 1965). Hedonic well being implies the feelings/moods as experienced happiness, sadness, anger and stress (Kahneman et al., 2004). Eudemonic well being concentrates on the meaning and purpose of one's life (Ryff et al., 2004).

Theoretical framework

There are two theoretical perspectives employed by researchers to explain the development of materialistic tendencies in people viz. the socialization perspective and the psychological perspective (Kasser et al., 2004). The socialization perspective stresses upon the influence of socialization agents such as kith and kin, peers, mass media etc in the development of materialistic values. On the other hand, the psychological perspective emphasizes one's circumstances giving rise to certain emotional states which either deter or facilitate the development of materialistic values.

Various theories predict a negative relationship between materialism and subjective well being. According to the self-determination theory (Deci & Ryan, 2000), goals based on extrinsic reward, may be related to negative subjective well being. This theory (Deci & Ryan, 1985; 2000) states that the basic needs of individuals are autonomy, competence, and relatedness with others . In contrast to these needs are the extrinsic needs or aspirations, such as financial success, social recognition, having an influential image etc. (Grouzet et al., 2005; Kasser & Ryan, 1996). Although extrinsic aspirations may be in accord with basic psychological needs to some extent (e.g. having social recognition may be aimed at satisfying needs for relatedness), the pursuit of extrinsic rewards is observed to be less satisfying than the pursuit of intrinsic rewards (Sheldon et al., 2004; Kasser and Ryan, 2001; Deci and Ryan, 2000).

Another theory by Andrew & Robinson (1991 in Barbera & Gurhan, 1997), says that the ability to realize one's aspiration has an impact on one's subjective well being. An individual with a high materialistic aspiration but with an inability to realize it will exhibit reduced subjective well being.

Multiple discrepancy model of subjective well-being proposes that individuals compare our experiences or emotions to some standard and this comparison might make them feel unhappy or dissatisfied if and when the resources they have acquired do not match the standard they have in

mind, called a social comparison discrepancy. Also, individuals feel unhappy or dissatisfied if they could access more resources in the past than now, called past comparison discrepancy (Michalos, 1985).

REVIEW OF LITERATURE

Studies suggest that high level of materialism is linked with low level of well-being (Sirgy et al., 2013; Burroughs & Rindfleisch, 2002; Sirgy et al., 1998; Mick 1996; Kasser & Ryan, 1993; Richins & Dawson, 1992; Belk 1984; 1985). Kasser and Ryan (1993) revealed that fulfillment of important life goals gives rise to increased life satisfaction. Intrinsic life goals are found to be positively related with subjective well-being whereas extrinsic life goals share a complex relationship with subjective well being (Zawadzka et al., 2015; Martos & Kop 2012; Rijavec et al., 2006; Skarżyńska, 2003).

Existing body of research demonstrates the adverse effects of materialistic values and goals dominant in consumerist societies (Kasser et al., 2007). The negative relationship between materialism and subjective well-being and other indicators of psychological health are most frequently reported downside of materialism (Kasser & Kanner, 2004; Dittmar, 2008).

Barbera & Gürhan (1997) proposed that envy is one aspect of materialism that exerts negative effect on SWB. They observed a negative relationship between non-generosity and envy and subjective well being in evangelical Christians and positively related in non-Christians. This reveals that the conflicting goals of religion and materialism can have a negative impact on subjective well being.

Research evidence abounds to substantiate the argument that people who pursue material goals tend to experience lower subjective well-being (Christopher et al., 2009; Kashdan and Breen, 2007). High materialistic individuals experience more negative feelings and are less satisfied with life and with specific life domains than less materialistic individuals (Christopher et al. 2007; Kashdan & Breen 2007). Research studies also reveal significantly lower subjective well-being in materialistic individuals, irrespective of their incomes (Kasser & Ahuvia, 2002; Kasser & Ryan, 1996).

Some scholars propose that materialistic individuals exhibit less satisfaction because they tend to set higher standards for their lives (Shaw et al., 2004; Goldberg et al., 2003). In studies conducted in different countries materialism was found to be related with dissatisfaction with life and lower subjective well-being (Dittmar et al. 2014; Roberts et al. 2005; Keng et al. 2000; Wright & Larsen 1993; Richins & Dawson 1992; Dawson & Bamossy, 1991; Belk, 1985; 1984). Dittmar et al. (2014) proposed that materialism is related to a number of well-being indices-subjective wellbeing, positive self-appraisals, psychopathology, and physical health. In various studies, materialists are found to be less happier and more dissatisfied with life than non-materialists (Chang & Arkin, 2002; Belk, 1985), and they are also found to experience more physical and psychological ailments (Kasser, 2002).

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Materialism has been found to be positively related to psychological illnesses such as paranoia and depression (Kasser & Ryan, 1993). Individuals scoring high on materialism are observed to be concerned with outward appearances, and motivated by the extrinsic goals (Kasser & Ahuvia, 2002).

Studies examined the effects of possessions on individuals and found that in individuals who place emphasis on acquiring goods exhibit psychological maladjustment and lowered well being. In addition to this, the individuals in quest of their identity through consumption tend to sacrifice altruism (Kasser et al .2007; 2002). Belk (1985) found a negative relationship between materialism and happiness and life satisfaction. Burroughs & Rindfleisch (2002) found a negative relationship between the number of possessions listed on a consumer's wish list and his life satisfaction.

Myriads of studies have confirmed the negative relationship between materialism and well-being measures such as life satisfaction and happiness (Diener 2009; Kashdan & Breen 2007; Ahuvia & Wong 2002; Burroughs & Rindfleisch, 2002; Tatzel 2002). Researchers examining the extrinsic life goals are attracted by 'materialistic triad' comprising fame, wealth and image and they found that these goals are associated with lower levels of life satisfaction (Kasser, 2002). Other studies have investigated the association of positive and negative affect (domains of well being) with the level of materialism (Hudders & Pandelaere, 2012; Christopher et al., 2009; Christopher & Schlenker, 2004). The results revealed that materialistic individuals reported experiencing more negative affect. Christopher and Schlenker (2004) found a negative impact of materialism on positive affect.

Delhey (2010) states "happiness tends to be pretty materialist in poorer places and more post-materialist in richer ones". Comparing the data obtained from 48 countries, he showed that income and material possessions are considered more important and central to personal quality of life in poorer countries than in richer ones.

A meta- analysis conducted by Dittmar et al. (2014) on the relationship between materialism and personal well being examined the effect sizes from a large number of independent studies and reported that materialism was negatively associated with well being. The largest detrimental effects were observed for various well being outcomes (risky health, consumer behavior and negative self appraisal) whereas the weakest effects were observed for life satisfaction and negative affect.

When Materialism is not detrimental to Well Being

Despite the cacophony about negative relationship between Materialism and Well-Being of an individual, it is interesting to note that there are studies that have shown contradictory results. It has been observed that striving for extrinsic goals for autonomous reasons feels less satisfying than autonomously striving for intrinsic goals (Sheldon et al., 2004). Some researchers

investigating the interaction of income with materialism and well being reported that higher income might cushion the negative impact of materialism on subjective well-being of the individuals (Nickerson et al., 2003). There is research evidence to suggest that it is not material acquisition which contributes to reduced wellbeing in an individual, but the material acquisition guided by extrinsic aspirations is the source behind reduced well being (Garðarsdóttir et al., 2009).

CONCLUSION, LIMITATION AND RESEARCH DIRECTIONS

Materialism has drawn considerable attention of scholars in the field of positive psychology because of its negative relationship with well being indices. The main theme of the paper is that materialistic tendencies can have a detrimental effect on well being. King et al. (2004) stated that there are many ways leading to a well-lived life and people do have a sense of what it takes to make for a fulfilled life. And despite the evidence available to the contrary, people persistently behave in ways that contradict these intuitions and pursue materialistic goals rather than pursue goals that may be more beneficial for their well-being. Interestingly, there is research evidence available that suggests that the relationship between materialism and well being is moderated by the income.

It is imperative to conduct researches examining the relationship between materialistic orientations and well being in Indian scenario considering demographic factors such as gender, age, study and work environment (with a special focus on public and private sector). Thus this paper proffers a need to understand this intricate relationship through theoretical as well as empirical approach. And while examining this relationship, it should be kept in mind that different cultures and economies can influence the meaning of materialism and attitude towards materialistic goals within a society. There is a pressing need to advance longitudinal and developmental researches in this area.

The major limitation of this paper is that it is a theoretical paper and aims to understand the intricacies involved in materialistic pursuit and the well being of the materialistic individuals through review of literature.

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Prosocial Behaviour- A Major Determinant of Helping People in Health Emergency

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Keywords: *Prosocial Behaviour, Health, Determinant, People*

Prosocial behaviour refers to the behaviours that benefit people (Penner, Dovidio, Piliavin, & Schroder, 2005). Prosocial behaviours are performed to benefit others, rather than to benefit the self. Typically, pro-social behaviors are an outgrowth of positive experiences and emotions (Aydinli et al, 2013). Feelings of empathy, compassion, and sympathy are also associated with helping, particularly when individuals recognize a moral obligation to care for others. According to World Health Organization, Pro-social behavior can emerge, however, from traumatic and painful experiences.

Cardiac arrest is a major public health issue, with more than 500000 deaths of children and adults per year even in developed countries. Despite significant scientific advances in care of cardiac arrest victims, there remain striking disparities in survival rates for both in-hospital and out-of-hospital cardiac arrest. It is seen that survival can vary among geographic regions by as much as 6-fold for victims in pre-hospital setting. For out of hospital cardiac arrest victims, the key determinants of survival are the timely performance of first responder or bystander cardiopulmonary resuscitation (CPR) and defibrillation for those in ventricular fibrillation and pulse less ventricular tachycardia. Only a minority of cardiac arrest victims receive potentially lifesaving bystander CPR, thus indicating that there should be some hindrances for the first responders from the general public to perform this in the right time (Bhanji et al, 2015).

Trauma is a major cause of mortality and morbidity in the world without discrimination of developed or developing countries. Injuries—resulting from traffic collisions, drowning, poisoning, falls or burns - and violence - from assault , self-inflicted violence or acts of war—kill more than five million people worldwide annually and cause harm to millions more. They

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account for 9% of global mortality, and are a threat to health in every country of the world. For every death, it is estimated that there are dozens of hospitalizations, hundreds of emergency department visits and thousands of doctors' appointments. The major causes of death in trauma accounts to life threatening hemorrhage, airway obstruction, head and spine trauma and other body system trauma. The concept of Golden hour, the initial hour after the occurrence of trauma is vitally important in the prognosis of trauma victims. The recently introduced concept of 'Platinum ten minutes' indicate the need for more faster and appropriate responses from the first responders in trauma most often the members of general public who witness the trauma. The appropriate actions like seeking the help from health providers and law enforcement authorities, quick actions to stop life threatening bleeding, removing airway obstructions and safe transport of victims to the appropriate trauma centre have a great impact on the survival rate of the trauma victims.

One of the major reasons that can determine the way a person respond to such a health emergency can be the Prosocial behavior or the attitude of that person to help the injured. These actions may be motivated by empathy and by concern about the welfare and rights of others, as well as for egoistic or practical concerns, such as one's social status or reputation, hope for direct or indirect reciprocity, or adherence to one's perceived system of fairness. It may also be motivated by altruism, though the existence of pure altruism is somewhat disputed, and falls into philosophical rather than psychological realm of debate. This study explores the pro-social behavior of public in helping in health related emergencies in selected areas of Kerala state.

Problem Statement:

A study to determine the Prosocial behavior of public in health related emergencies in selected areas of Kerala state.

OBJECTIVES:

1. Determine the Prosocial behavior of public in health related emergencies
2. Compare the Prosocial behavior of public in helping in health related emergencies residing in rural and urban areas.
3. Find out the association between prosocial behavior and selected socio demographic variables of public.

METHODOLOGY:

Quantitative non-experimental approach with descriptive survey design was selected for study. The sample consisted of 200 participants from general public and the sampling technique used is non-probability consecutive sampling technique.

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Data Collection Tools and Technique:

The tools were Demographic Proforma and the Prosocial Behaviour Assessment Rating Scale. The rating scale used was an investigator prepared 5 point Likert type scale with 18 items. Data collection technique was self-reporting.

Data Analysis:

The collected data were analysed using descriptive and inferential statistics using SPSS version 17.

RESULTS

Majority of the study participants were in the age group of 35-40 years. Most of the study participants had college education (65%). 56% of the study participants were males. 23% of them had the previous experience of helping in health related emergencies. Among 200 study participants 79% had a very favourable prosocial behaviour and 21% had a moderate prosocial behaviour. None of the participants had a low score in pro social behaviour. There was no significant difference between the prosocial behaviour of people residing in rural and urban areas at 0.05 level of significance. There was no significant association between prosocial behavior and selected socio demographic variables of public in health related emergencies at 0.05 level of significance.

INTERPRETATION AND CONCLUSION:

The findings of this study reveal that the members of general public have a very good prosocial behaviour. Most of them want to extend their helping hands in health related emergencies. Even though the general Public in the state are far behind in the global surge to learn cardio pulmonary resuscitation and other first aid measures, they have a very good prosocial behaviour to help their fellow beings. The participants reported that lack of knowledge and skill in Basic Life Support prevents them from actively intervening during health related emergencies. It is therefore important to use the first responders' service in a fruitful manner by empowering them to do what is most needed in health related emergencies. Health care providers have to play a very important role in the training of lay public in Basic Life Support.

IMPLICATIONS

One of the major reasons that can determine the way a person responds to a health emergency can be the prosocial behavior or the attitude of that person to help the sick or injured. The individuals who have good prosocial behaviour are willing to extend their helping hands to people. They are easily trainable and can be prepared with skill training through simulation to be excellent first responders. Nurses being the committed health care task force both in hospital and community settings have to extend their knowledge and skills to prepare the public force to achieve the goal of early identification of the health emergency and Basic Life Support.

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Revisiting the Personality Traits and Dimensions within the Frame Work of Vedic Science

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ABSTRACT

The personality, as the outer garment of the character, manifests on different fronts of human actions and is assessed in an organization through several parameters, the so-called personality traits and dimensions. One popular approach used for this purpose is that of Jung which is based on four cognitive styles of psychology. The personality theory of Jung, in fact, yields four sharp categories of personality using two opposite ways of gathering information, namely sensation and intuition and another pair of two opposite ways of evaluating information, namely thinking and feeling. These different ways of gathering and evaluating information combine to form matrix of four problem-solving behaviors in cognitive psychology. Using the basics of Vedic Science, in particular the science of the Self (as developed earlier through the atomic model of human Being [1]), a deeper foundation to this scheme of classification of Jung is suggested in the present work. While investigating the ingredients of personality at the most fundamental level within this frame work, certain clues to improving the personality are also given. Further, with reference to an integrated personality (in terms of integrated body, mind and soul towards the success of an action) a personality creation mechanism is suggested which yields a new classification scheme on the basis of Vedic Science. It is argued that modern methods for assessing the personality while lack in assessing the spiritual content in the personality, the scheme suggested here, however, is rich enough for this purpose.

Keywords: *Personality Traits, Dimensions, Frame Work, Vedic Science*

Whether it is character building or the personality development, both mechanisms are mostly individual based in the sense that the external environment only offers a standard to judge their merit and not the method of their creation. While the former is somewhat subjective, like the inner garments of soul, the latter is objective like the outer garments. The character basically focussing on the distinctive human qualities, the personality, on the other hand, is an extreme

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adulation of the individual. The character gives a boost to moral strength, the personality, however, invites both moral and physical strength in a varying proportion. However, both these aspects of human behavior originate from the same dynamics of inner essences of life (EOLs), termed here as the ‘personality creation mechanism’ (PCM).

In this paper, after presenting a brief survey of these aspects of human behavior studied in the modern context in the next section, the basic ingredients necessary for their creation are discussed in Sects.3 and 4. In Sect.5, we explore the possibilities of analyzing different personalities within the framework of Vedic science formulated earlier [1-3] by the author in terms of a philosophical atom-like (patomic) model of human Being and suggest some tips towards their improvement in Sect.6. Further, in Sect.7 we demonstrate a correspondence between two related aspects of human behaviour, namely ‘personality creation’ mechanism and the ‘art of integrating’ the body, mind and soul. An analysis of personalities within this framework is carried out in Sect. 8. Finally, concluding remarks are made in Sect.9.

While some mathematical preliminaries with regard to the dressing of EOLs with consciousness are given in Appendix A, we list here some abbreviations, notations and a glossary of some words used in the text. EFLs : essences for life; EOLs : essences of life appearing as per proposed [1] patomic (philosophical atom-like) model of human Being consisting of biological body (B), senses of knowledge/perception and motor action (SE), mind (the faculty of feeling and emotions, M), intellect (the faculty of decision, I), ego (the faculty of memory or of self-sense, E), soul or spirit (the innermost existence, SO), and the external stimuli or worldly objects (WO) with which a human Being (b) interacts. Further, as per Vedic science [4] a human Being appears in three existences, namely causal or astral (\mathcal{C}), micro (\mathcal{M}), and gross (\mathcal{G}).

STUDIES ON PERSONALITY AND ITS DEVELOPMENT IN MODERN TIMES

Personality development has been a subject of study and research in psychology departments for more than a century now. In view of the downfall of moral and ethical values in the society as also an increase in the psychic diseases not only among young generation but also among professionals, the subject has become the thrust area of study in recent times. The subject has gained further momentum in its new incarnation under the names of ‘individual processes’ or ‘self-management’ in the institutes of management. In either situation, the methodology adopted is the one that is based on statistical analysis of data or on a vast variety of case-studies. This leads to empirical theories for the subject. Unless an individual is defined and analysed at the most fundamental level in terms of EOLs and EFLs, a formal theory for the subject remains a far cry. In its new incarnation, no doubt the subject has started dealing with very subtle and somewhat intriguing cases, but the approach remains an empirical one, mainly because the case-studies supply the basic facts only in a piece-meal manner towards the development of theories. In spite of all this, there still remains a need of a formal theory of personality. In the forthcoming sections an attempt will be made on this front using the patomic model [1] of human Being.

In its new incarnation, the subject has grown mostly in the West where there have been frequent industrial revolutions and the problems were cropping up between employers and employees. When studying the behavior of employees in an organization, one broadly considers five heads corresponding to five categories of processes [5] that take place, namely (a) individual processes, (b) inter-personal and group processes, (c) organizational processes, and (d) change processes, over and above them is the (e) environment, in which the employees are working. For a detailed analysis of these processes within the framework of atomic model, we shall return in Sect. 8. Here, however, we make some brief observations on the prevailing studies carried out now mostly in a scientific spirit in the institutes of management,

Personality And Individual Processes

Obviously, the personality of an individual plays an important role in the dynamics of the organization as a whole. In addition to personality, the other aspects of study under the caption of ‘individual processes’ pertain to one’s perception, values and attitudes, learning capacity and its reinforcement or implementation, work motivation, and the last but important one is the capacity of bearing the work stress. Many of these aspects clearly rely on the fact as to how an individual has created his personality out of its subjective content, i.e., the character of the person. Before proceeding further, let us look at some modern definitions of the personality of a person.

As such there is no unique definition of personality. However, according to Engler (1991), personality of a person represents personal characteristics that lead to conscious patterns of behaviour. One analyses these behavioural patterns when the person interacts with other persons. According to another definition by Hogan (1991), personality refers to relatively stable pattern of behaviours and consistent internal states that explain a person’s behavioural tendencies. Further, the personality is considered to have both internal and external elements. The external traits in fact are observable behaviours that help in identifying one’s personality. The internal states, on the other hand, represent the thoughts, values and genetic characteristics that one infers from the observable behaviours.

One way to understand the personality of an individual is to understand both internal and external elements that the individual has in common with others and what makes that particular individual unique. Thus, each employee in an organization is unique but may or may not respond as others do in a given situation. In fact, the theories of personality are developed mainly on this ground. Since the behavior is an outcome of stable personality traits, some social scientists do not accept the notion of personality as such instead they argue that the behavior can be determined exclusively by the external conditions. Moreover, stable traits do exist and these lead people to behave consistently with time and in different circumstances. In such descriptions, though the concept of personality appears illusive, but in reality it is not so; it remains in the background while understanding the traits of the individual. Like this, there are many other aspect of one’s personality which have been the subject of study in behavioural science.

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However, we refrain ourselves from going into these details here. Yet, some pertinent points are worth mentioning here:

- (i) Hogan's definition of personality is somewhat more intriguing in the sense that it accounts for internal states and that too the consistent ones. This clearly points to the dynamics of inner EOLs in the present context.
- (ii) When the behavior patterns of a person are compared with those of others, it still remains a case of relative studies, may be good for an organization but not on an absolute scale. For the absolute scale, every society or culture, however, has certain standards to judge the merit of one's personality. This standard is normally defined after keeping in mind the social and/or religious norms. For example, one can use the Raj Yoga of Patanjali as a standard [3].
- (iii) The external environment in general may consist of humans, nonhumans and inanimate objects. The interactions of a person with them will, however, differ from person to person. Thus, an account of external environment, when comparing the personalities is not that simple as considered in the organizational studies.
- (iv) Hofstede's framework (1980) can be presented as follows: In tune with point (ii) above, culture also provides more than an understanding of personality development. In fact, without a cultural-religious framework, the behavior of a person and hence his personality has no meaning and without meaning behavior has no purpose. It is the culture that provides people with a set of values and assumptive beliefs as well as implicit inferences about how the world operates. Thus, the culture of the society or the country a person lives in, also has an impact on the personality.

Understanding personality traits and dimensions

With a view to differentiating, ordering and naming the differences in people's behavior and experience, the concept of *personality factor* has been introduced in the multi-dimensional model of personality. Pertaining to human qualities, the words which were semantically similar (synonyms) were grouped in some minimal number of 16, as antonym pairs. These sixteen personality factors so found are as follows: (i) apprehensive vs. self-assured, (ii) assertive vs. humble, (iii) conscientious vs. expedient, (iv) controlled vs. casual, (v) emotionally stable vs. unstable, (vi) experimental vs. conservative, (vii) happy-go-lucky vs. sober, (viii) imaginative vs. practical, (ix) more intelligent vs. less intelligent, (x) outgoing vs. reserved, (xi) relaxed vs. tense, (xii) reserved vs. warm, (xiii) shrewd vs. forthright, (xiv) suspicious vs. trusting, (xv) tough-minded vs. sensitive, and (xvi) venturesome vs. timid. For the analysis personalities these 16 factors are further reduced to five which, in turn, have helped in developing the so-called 'Big-Five' (multidimensional) personality theory. These Big Five factors identified are: (a) extraversion (comfort level of individual), (b) agreeableness (individual's behavior towards others), (c) conscientiousness (extent to which one shows consistent and reliable behavior while working in organization), (d) emotional stability (ability to control his emotions at the time of crisis), and (e) openness to experience (ability to be open to any kind of experience that helps

him to do the job). Each of these factors helps in understanding the behavioural patterns of one's personality.

Another approach for the personality test, based on cognitive styles of psychology and very widely used in business organizations, is due to Jung (1933). Cognitive style describes the way in which an individual perceives and processes information. According to Jung, individuals develop, mostly unconsciously, preferred ways of gathering information and evaluating it to make decisions. The two opposite ways of gathering information are through a sensing method and by intuition, and the two opposite ways of evaluating information are thinking and feeling, as depicted in Fig.1. These different ways of gathering and evaluating information combine to form matrix of four problem-solving behaviours in cognitive psychology, namely sensation thinkers (ST), intuitive thinkers (IT), sensation feelers (SF), and intuitive feelers (IF). Fig.1 demonstrates as to how these four personality types emerge. Each type has its merits and demerits, but in a complex organization all are necessary.

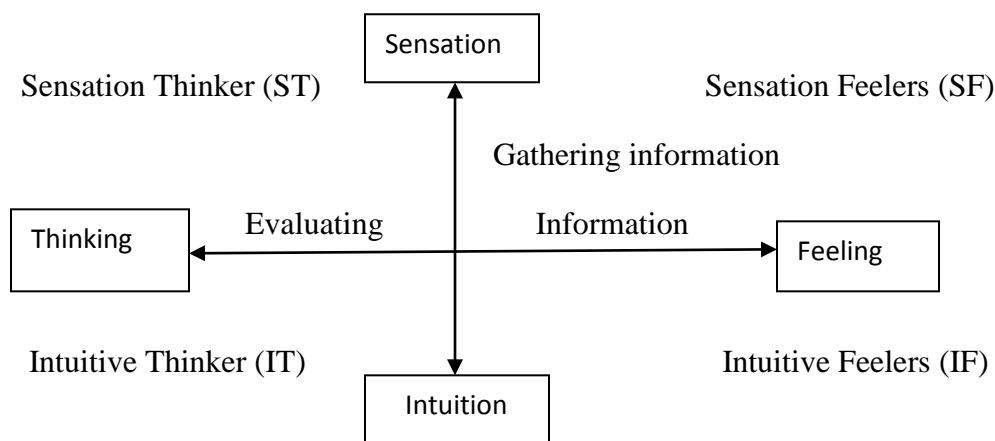


Fig. 1: The framework of Jung for handling information. In this representation, the four quadrants depict the four cognitive styles of analyzing the personality of individuals.

Further note that while using these types in the analysis of personalities of individuals, the roles of personality of managers, judges, or recruiters cannot be ruled out, and the same does not appear clearly in the theory of Jung. In the next section we make some more observations on this theory.

SOME REMARKS ON THE PERSONALITY THEORY OF JUNG: A POSSIBLE MODIFICATION

In what follows, we make some observations on the personality theory of Jung and suggest some possible modifications to it in the light of atomic model of human Being [1, 2].

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- (i) The basic requirement to develop preferred ways of gathering information and evaluating it to make decision by a person is that he has to be conscious. A dead body can not undergo the processes of sensation, feeling, intuition and thinking. The respective agencies (faculties) responsible for these processes also have to be functional and conscious. This consciousness or awareness may vary from person to person but cannot be zero.
- (ii) In fact, in Fig.1, a simple replacement of ‘sensation’ by the biological body and senses of knowledge ($B+SE = G$), ‘feeling’ by the faculty of emotion, i.e. the mind M , ‘intuition’ by the faculty of memory, i.e. the ego E , and ‘thinking’ by the faculty of decision, i.e. the intellect I , as displayed in Fig.2, will help a lot in understanding and implementing the theory of Jung.

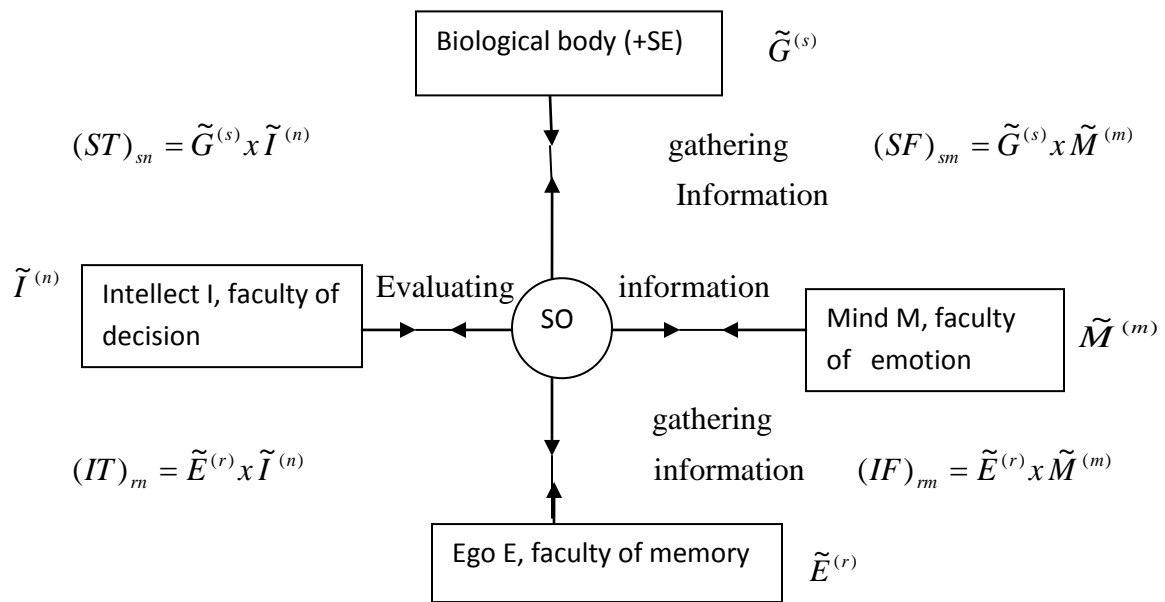


Fig. 2: Possible modifications to the personality theory of Jung in the light of patomic model of human Being. Matrix formation, which helps in distinguishing the personalities, can clearly be seen in this picture in all the four quadrants.

(iii) Since a person looking for an opportunity has to be conscious enough, it is worthwhile to consider the dressed versions each of his G , M , E and I with consciousness up to certain orders, say, respectively up to s , m , r and n orders as $\tilde{G}^{(s)}$, $\tilde{M}^{(m)}$, $\tilde{E}^{(r)}$ and $\tilde{I}^{(n)}$ (cf. Fig.2). (See Ref.(2) and Appendix A for the concept of dressing and for the dressing rules of EOLs with consciousness).

(iv) There is no point in calling thinking and feeling as opposite ways of evaluation information, they are rather complementary to each other in view of the dressing rules (cf. Eqs.(A.1)-(A.3)). Moreover, if they are the opposite ways, then there will never be a stability— emotional or

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otherwise (cf. Big-Five theory). Therefore, not only I and M and also G and E pairwise have to be in harmony but also each of the four has to be in tune with the source of consciousness SO.

(v) To illuminate or make functional all the four agencies constantly with consciousness the source SO plays a central role in Fig.2. This fact is shown by both-way arrows between each pair of agencies.

Such a scheme of study not only offers rather a deeper foundation to the theory of Jung but also suggests a way out to construct four-style matrices in cognitive psychology in precise mathematical terms, viz.,

$$(SF)_{sm} = \tilde{G}^{(s)} \times \tilde{M}^{(m)} ; (IF)_{mr} = \tilde{M}^{(m)} \times \tilde{E}^{(r)} ; (IT)_{nr} = \tilde{I}^{(n)} \times \tilde{E}^{(r)} , (ST)_{sn} = \tilde{G}^{(s)} \times \tilde{I}^{(n)} .$$

where $\tilde{G}^{(s)}$, $\tilde{M}^{(m)}$, $\tilde{E}^{(r)}$, and $\tilde{I}^{(n)}$ are the dressed versions of the corresponding agencies as discussed in Appendix A. Next we discuss the subjective aspect of personality, which, in turn, pertains to the character building of an individual.

PERSONALITY AND ITS INGREDIENTS: A SCHEMATIC PICTURE

In this section we proceed to analyse certain features of personalities within the framework of atomic model of human Being, particularly with reference to the dynamics of inner EOLs. A flowchart to this effect is shown in Fig. 3, which in some sense is the modified version of the one discussed by Parthasarathy [6]. If a person is conscious enough to undergo self-observation and watch the nature of *sankalpās*, then this chart works, otherwise for a common man engaged badly in worldly objects, Parthasarathy proposes [3,6] another broad classification of personalities.

In Fig. 3 the role of each EOL is clearly demonstrated in creating a personality of an individual. The process starts at the level of E through the nature (in terms of *gunās*) of a *sankalpa* and accordingly the gross body G(=B+SE), mind (M), or intellect (I) come into action, though not in isolation but in a dominating manner. For example, if G dominates over M and I, then it leads to a personality rich in bodily qualities which manifest through his actions and perceptions but in a limited sense. Similarly, if M dominates over G and I, then it leads to an emotional personality through feelings and other such emotions. However, the role of I is important in bringing the spiritual content in the personality.

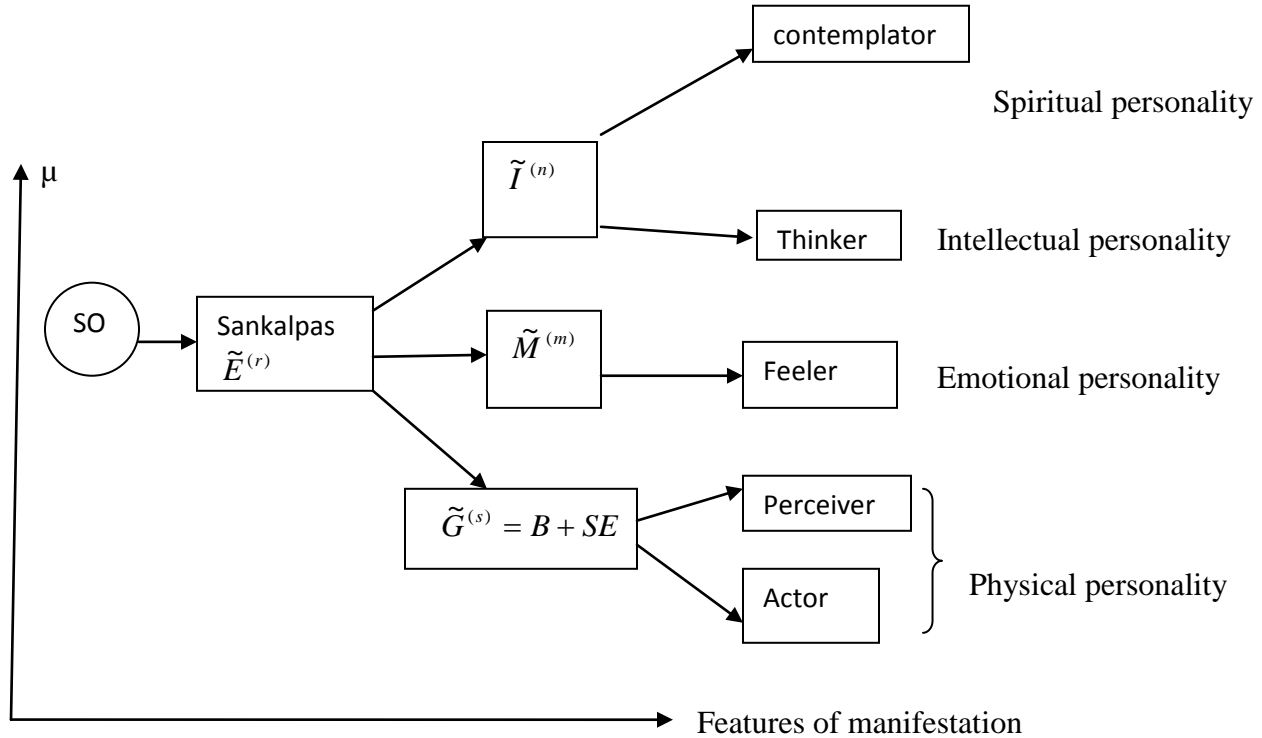


Fig. 3: A flow chart explaining the creation of different types of personalities in an individual depending on the levels of development of his FOU.

In fact, if the intellect I is tuned to think dominantly over G and M and to the acceptance of spatio-temporal character of the outer world, then such a thinking would lead to intellectual personality (say, that of scientist-category of persons). On the other hand, if I is tuned to think beyond the spatio-temporal character of the outer world by way of realizing (i.e. using its subtle component) the transcendental reality behind its working, then such a contemplation leads to a spiritual personality (say, that of yogi-category of persons). According to Parthasarathy [6], the subtle intellect is the discriminating faculty which contemplates upon and distinguishes the transcendental reality from the terrestrial world. Note that the nature of a *sankalpa* also plays role at this stage.

HOW DO PERSONALITIES DIFFER?

Whether it was the scheme of study of Jung (cf. Fig. 1) for the personality test or the original description due to Parthasarathy [6] for the creation of personality, both define four types of personalities in a broad sense. Of course they are not independent of each other. Even among these four types, there can be further sub-divisions of personalities and to account for them both schools of thought offer certain possibilities. Here, however, we have suggested a simple way to account for these differences, i.e., by replacing the nascent version of EOLs by the dressed ones. It is the order of dressing of an EOL with consciousness (cf. Appendix A) or the extent of evolution of one's EOLs with meditation that will further make a difference among the personalities of a given category. For example, there may be a variety of each of spiritual,

intellectual, emotional, and physical category of personalities (cf. Fig. 3) and the same can be understood if one considers different orders of dressing or the development of the corresponding EOL with reference to meditation. In fact, this evolution of EOLs differs from person to person.

Another aspect emphasized in Fig. 3 which may help in differentiating the personalities is to view the personality creation scheme as a whole in the positive quadrant of μ vs. features of manifestation plane. Clearly, as the intensity of meditation (self-observation) enhances then the personality of a person may change from the physical to emotional, intellectual and then to the spiritual level. Similarly, features of manifestation in the personality increase as one proceeds from the zones of subtlest (soul), subtler (E, I and M), subtle (their functions), and finally to the gross and grossest features as shown in Fig. 3. In fact, such considerations in the creation aspect suggest the ways to improve one's own personality.

Example : Even among spiritual persons there is a spectrum of their realization, among scientist and philosopher category of persons or among the so-called skilled workers there is spectrum of their intellectual evolution, and thus each person has a varying view of the same world-order; all this creates sub-division of personalities.

It may be mentioned that the *Asthanga* yoga of Patanjali in terms of its components and sub-components can also help in explaining the sub-divisions of personalities [3].

IMPROVING A GIVEN PERSONALITY: CHARACTER BUILDING

Character building means inculcating the human (both moral and ethical) values in one's way of life as defined by the norms of a society and at a given point of time. Although it is not a difficult task for an individual to do so, yet limits on such achievements are suggested by the Vedic science. As far as the nature and fruit of actions of a person are concerned, there are three basic reasons to classify them, namely *prārabdha*, *sancit* and *kriyamāna* which respectively means, destined out of the previous or past birth(s), performed in this birth itself and the ones performed in the present. Thus, the efforts can be made to build the character or to improve the personality and accordingly the success can be achieved to the extent that the actions confine only to the domains of *sancit* and *kriyamāna* category. Hardly any change is possible with regard to the fruit of actions of *prārabdha* category, as it is all destined in advance to a great extent.

To this effect, first of all there has to be a desire to improve upon the character. If it is there, then there is a huge list of human qualities to be inculcated towards this improvement of personality in all the three *G*-, *M*- and *C*-domains. Some such qualities which a conscious person need to inculcate in his character are: truth, nonviolence, non-stealing, continence, abstaining from vilification, modesty, un-haughtiness, artlessness, purity, contentment, endurance, spirit of service, sacrifice, charity, austerity, study of religious scriptures, mind-control, sense-control,

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humility, straightforwardness, compassion, faith, discrimination between true and false, dispassion, living in seclusion, non-accumulation of wealth and property, lack of doubt and distraction, minimization of desire, forgiveness, patience, absence of malice, fearlessness, pridelessness, peace, faith in a deity, etc. One can adopt some or all of them at a time and try to improve his character and subsequently the personality. Note that this spectrum of human qualities includes those of all the three *G*-, *M*- and *C*-domains and one can pick any or all of them conveniently to go from the level of physical personality to that of the spiritual one.

Note that for these changes in personality space and time considerations are immaterial, i.e. the change can occur anywhere and at anytime as and when a person is inspired by an event or incidence of the outer world, and develops a will power for the change, or when opts for a better *sankalpa*, or when certain events constantly pinch him during the self-observation. Many examples can be traced from day-to-day life to this effect.

As per Vedic science the senses in the body are very powerful as far as the attachment to their respective sense-object is concerned. In fact mind joins this attachment and moulds the intellect accordingly (cf. SMBG, Verse 2.67). Conversely, if the intellect is powerful enough (i.e. dressed highly with consciousness) then the flow of energy towards the sense-objects can be controlled and the working of the (body) system becomes ordered from the so-called the chaotic one. Even this orderliness of the whole body-system can be of different categories depending upon the nature of intellect I and that of *sankalpās* in terms of three *gunās*, namely *sātvik*, *rajas* and *tamas*. We analyse this mechanism in the next section and argue as to how a particular case of this mechanism yields the integration of body, mind and soul.

PERSONALITY CREATION MECHANISM AND THE INTEGRATION OF BODY, MIND AND SOUL

According to Vedic science the words body, mind and soul in the phrase ‘integrating body, mind and soul’ respectively stand for the gross (*G*), micro (*M*) and causal (*C*) existences of the human Being. Their integration is in the spiritual sense and the same, in fact, is an idealized situation which is not easy to achieve by an individual everywhere and at all times. No doubt, there is always a coordination of body, mind and soul towards fruit or success of actions but their integration is a particularized case of this coordination in the sense that what one thinks, so he expresses in words and acts in practice accordingly. In fact, the word integration is used in two related senses, namely (i) in the sense of strengthening the body, mind and soul towards the success of an action, and (ii) to have straightness in all activities of mind, senses and the body. Any way both these purposes are useful as far as the development of personality is concerned. Any departure from this policy does not justify the integration of body mind and soul. It is only in this situation that one can make best use of the energies associated with his body, mind and soul. This indeed creates an ideal condition to ensure success in the actions so performed.

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Now question arises as to what type of actions need to be performed with reference to the maintenance of world-order and the value system in a society? Naturally, one does not want to spoil the world or the Universe as a whole— a beautiful gift of Mother Nature. Thus, the above idealized situation should be the goal of one's life and the integration of body, mind and soul should be taken in the spirit of positive pursuits [2,3] and spiritual sense. In what follows, we discuss a personality creation mechanism (PCM) in the light of Vedic science and argue that the integration aspects of body, mind and soul are just a particular case of this general theory.

Although one can start with the dressed versions of inner EOLs and analyse the case of the finest possible processes taking place inside the human Being, but here we restrict ourselves only to the nascent versions of EOLs (cf. Appendix A). However, as we consider the role of three *gunās* in the mechanism, this in some sense will bring in certain orders of dressing of EOLs with consciousness. Here we discuss a Jung-type (cf. Sect. 3) matrix formation at the level of character building, which at a later stage affects the personality so developed.

Note that either due to *prārabdha* or due to certain in-born qualities of an individual a *sankalpa* (S) can come in three colors or is influenced by the three *gunās*, namely *sātvik* (s), *rajas* (r), *tamas* (t) to furnish three possibilities S_s, S_r, S_t . On the other hand, the guiding agency (intellect) I, which for an ordered working of the body-system plays an important role in the actions performed by the body G through the mind M, can also comes in three abstract colors as I_s, I_r, I_t . Now, in order to account for all the possibilities, one can construct the so-called personality matrix P from the *sankalpa* matrix S and the intellect matrix I, viz. $\mathbf{P}=\mathbf{S} \times \mathbf{I}$, as

$$P = \begin{pmatrix} S_s - I_s & S_s - I_r & S_s - I_t \\ S_r - I_s & S_r - I_r & S_r - I_t \\ S_t - I_s & S_t - I_r & S_t - I_t \end{pmatrix} \equiv \begin{pmatrix} (SI)_{ss} & (SI)_{sr} & (SI)_{st} \\ (SI)_{rs} & (SI)_{rr} & (SI)_{rt} \\ (SI)_{ts} & (SI)_{tr} & (SI)_{tt} \end{pmatrix}.$$

Following remarks are in order about the nature of this construction:

- (i) Note that s, r, t are the independent variables and constitute a space (may be Cartesian in mathematical sense) in which both *sankalpa* and intellect are projected.
- (ii) There are three zones of integration of body, mind and soul: The nine elements of the matrix $\mathbf{P}=\mathbf{S}\mathbf{I}$ represent nine types of characters or personalities, out of which the diagonal ones, namely $(SI)_{ss}$, $(SI)_{rr}$ and $(SI)_{tt}$ correspond to the integrated body, mind and soul of an individual. The integration can be there for all the three category of persons, namely, (i) for a *sātvik* person, this in turn will take him to the spiritual zone, (ii) for a *rājasik* person, this in turn will make him a successful person in worldly matters by maintaining no harm to Nature, and (iii) for a *tāmasik* person, this in turn will take him to a downfall with reference to the world-order and society.
- (iii) In general it is the *sankalpa* that influences the intellect and not the vice versa. Therefore, $SI \neq IS$, i.e. the matrices S and I do not commute. However, for a man of

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perfection or for a yogi of highest degree both S and I stand in the same zone of consciousness [2] and they can commute, i.e. $SI=IS$, only for this exceptional case.

- (iv) Nonintegrated personalities: There are six categories of nonintegrated personalities corresponding to six off-diagonal elements in the personality matrix P, which are (1) persons improving from *rājasik* to *sātvik* zone correspond to $(SI)_{sr}$; (2) persons improving from *tāmasik* to *sātvik* zone— a bit difficult task, correspond to $(SI)_{st}$; (3) persons improving from *tāmasik* to *rājasik* zone correspond to $(SI)_{rt}$; (4) persons degrading themselves from *sātvik* to *rājasik*, correspond to $(SI)_{rs}$; (5) persons degrading themselves from *sātvik* to *tāmasik*, correspond to $(SI)_{ts}$, and (6) persons degrading themselves from *rājasik* to *tāmasik*, correspond to $(SI)_{tr}$. These categories are further listed in Table 1 (cf. category (b)).

Table 1: Classification of personalities on the basis of Vedic science.

S.No.	Category of personality	Nature of personality
(a)	Integrated personalities	(1) Satoguni sātvik persons (2) Rajoguni rājasik persons (3) Tamoguni tāmasik persons
(b)	Non-integrated personalities	(4) Rajoguni sātvik persons (5) Tamoguni sātvik person (6) Tamoguni rājasik persons (7) Satoguni rājasik persons (8) Satoguni tāmasik persons (9) Rajoguni tāmasik persons
(c)	Ideally integrated personalities	(10) Satoguni sātvik persons with zero nonintegrated component (11) Rajoguni rājasik persons with zero nonintegrated component (12) Tamoguni tāmasik persons with zero nonintegrated component

- (v) Integrated personalities of Remark (ii), in whichever zone they are, have stable mind at least for a certain period of time and at a given place. On the other hand, the non-integrated personalities of Remark (iv) are of fluctuating mind, always undergoing transitions from one type nature to another type.
- (vi) In view of Remarks (iv) and (v), the personality matrix P is not symmetric i.e., $(SI)_{ij} \neq (SI)_{ji}$, where $i, j = s, r, t$ and $i \neq j$. As a matter of fact when a person undergoing transitions from one zone of *gunās* to another zone, the circumstances and environment of the person change. Therefore, a change in personality is bound to exist in spite of the forward and backward transition of the same nature.

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- (vii) A better lot of integrated personalities: Integrated personalities of remark (ii) correspond to the fact that the nature of person in terms of *gunās* whether *sātvik*, *rājasik* or *tāmasik* is sharply defined; otherwise most of us are born with mixed *gunas*, but dominated by any one or two of them. Therefore, it is worthwhile to look for the diagonalized version of the matrix P as P_D , viz.,

$$P_D = \begin{pmatrix} (\bar{SI})_{ss} & 0 & 0 \\ 0 & (\bar{SI})_{rr} & 0 \\ 0 & 0 & (\bar{SI})_{tt} \end{pmatrix},$$

where the integrated personalities corresponding to $(\bar{SI})_{ss}$, $(\bar{SI})_{rr}$ and $(\bar{SI})_{tt}$ are truly the integrated ones in practical terms. In fact one can attempt to find the diagonalizing matrix whose elements will be the appropriate mixtures of different *gunās*. Further, this mixing can be attributed to the effect of circumstances and environment in which the individual is placed. We can place this class of personalities in ideally integrated personalities as there is no energy loss in any other dimension of human activities. For the role of trinity of *gunās* in personality studies, we refer to some recent work of Singh, Mishra and Raad [7] and also of Parthasarathy [8]. Next we analyse the personalities listed in Table 1.

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Note that the nomenclature of a personality in Table 1 refers to both the innermost, i.e. at the level of *sankalpa* and the exterior, i.e., at the level of intellect aspects of a personality. For example, a *rajoguni sātvik* personality (cf. case b4)) means the *sankalpa* and intellect of a person are enveloped respectively in *rājasik* and *sātvik gunās*. Further, the trinity of *gunās*, namely *sātvik*, *rajas* and *tamas*, in some sense can be considered in the spirit of superlative, comparative and positive degrees of an adjective, respectively. It is well accepted that the inner EOLs or the human characteristics enveloped in *sātvik guna* are the best from the point of view of both maintenance of world-order and ethical as well as moral values in a society. In fact, the inner EOLs enveloped in *sātvik guna* lead to actions in the outer world which are the best in the maintenance of world-order. Contrarily, the roles of EOLs or of human characteristics enveloped in *tāmasik guna* in human behavior and actions are not well appreciated in a society and also not considered to be good in the maintenance of world-order. In a nut-shell, it is not wrong to say that the positivity at any level leads to order in the Universe whereas the negativity leads to chaos in the Universe.

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The three categories of personalities of Table 1, namely integrated, nonintegrated and ideally integrated can be analysed further in terms of their stability with respect to space and time. In the first category, the *satoguni sātvik* personality is supposed to be the best where as the *tamoguni tāmasik* personality is considered as the worst with reference to values in a society or with regard to the world-order. In these cases there is an occasional stability in the nature of such persons and the equilibrium among the trinity of *gunās* keeps on changing with circumstances and environment. Nonintegrated components also manifest occasionally in these personalities, but for the most of the time there is definitely some correlation between their thinking and doing.

The second category concerns the nonintegrated personalities which are 6 in number. Among them the *tamoguni rājasik* and *rajoguni tāmasik* personalities (cf. (b6) and (b9)) are considered to be on the worse side whereas the *rājoguni sātvik* and *satoguni rājasik* personalities (cf. (b4) and (b7)) are on the better side in a relative sense. This category of persons never notices a stability of mind and thus the question of equilibrium among the trinity of *gunas* does not arise. Often there appears a kind of nonlinearity between their thinking and doing. These personalities keep on changing their decisions with environment and circumstances.

Clearly, the third category of ideally integrated personalities is the most stable ones with respect to space and time. Also, they are not affected easily by the changed environment and circumstances. This is mainly because a kind of equilibrium among the trinity of *gunās* is already established in an ideal and appropriate manner prior to the final achievement. Even in this category, *satoguni sātvik* personality is the best and the *tamoguni tāmasik* is the worst with regard to the standards set in a society in spite of the fact that there is a linearity and simplicity between the thinking and the acting of persons of all the three categories.

Further it is noticed that the personality of a person is not stable during his learning stage, i.e., when he is a student or becomes a youth. However, only after attaining the adulthood, his personality tends towards the stability and the changes are slow but steady, if at all they are there. Many examples of these categories can be found in the society. However, we refrain ourselves from such details here.

CONCLUDING DISCUSSION

With a view to giving a better foundation to the subject of personality and its development in a person, several suggestions are advanced in this paper within the framework of the patomic model. To this effect, commonly used theory of Jung for the personality test takes a new look when the agencies of gathering information and evaluating information in the work of Jung are pairwise replaced by gross body (G) and ego (E) and by mind (M) and intellect (I), respectively. Latter are the basic ingredients of the patomic model which contribute to the dynamics that takes place inside the human Being not only before but also during his performance of an action. Further replacements of these EOLs by their dressed versions with consciousness (cf. Sect. 3) clearly explain, in a very general manner, the matrix formation corresponding to the four

cognitive styles of psychology namely sensation feelers, intuitive feelers, sensation thinkers and intuitive thinkers.

Alternatively, within the frame work of a similar scheme due to Parthasarathy which is also based on the concepts of Vedic science, the ingredients of a personality are identified and their role in the dynamics of EOLs is analysed (cf. Sect. 4). Viability of this scheme is also demonstrated in classifying the personalities and their tests. It is further argued that the personalities of persons differ on the basis of different orders of dressing of their different inner EOLs with consciousness. Using again the concepts of Vedic science, some ways to improve the character and subsequently the personality of a person are highlighted (cf. Sect. 6). In particular, the role of *gunās* of Vedic science in the functioning of inner EOLs is explored. This forms the basis for the newly proposed personality creation mechanism. In mathematical terms, a personality matrix is formed to this effect, whose nine components accordingly define nine types of personalities in general (cf. Table 1). Out of these nine, three types are the integrated ones and the rest six are the non-integrated. One can as well classify the personalities on this basis and prepare a questionnaire to this effect. Compared to the scheme of Jung, this kind of personality test will definitely reflect a long-term stability in the nature of a person. As far as the integration of body, mind and soul towards the performance of an action is concerned, it appears as a particular case of this general analysis. It is emphasized that a mixed nature of *gunās* in the personality will give rise to a better integrated personality as far as the stability of mind is concerned. Further, note that such an integration of EOLs is suggested to exist in different psychic zones corresponding to *sātvik*, *rājasik* and *tāmasik* nature of a person. The subject matter in fact requires further analysis and case studies. We restrict ourselves from going into these details here. However, it may be mentioned that on the personality of a person there is also a great impact of culture and environment in which he lives in. An account of these factors should also be taken care of in such studies.

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APPENDIX A: DRESSING RULES OF INNER EOLS WITH CONSCIOUSNESS

As per common experience the EOLs of a person work when they are illuminated by or enlightened with the consciousness, i.e. in the presence of soul. Not only this, an external object is perceived when only conscious EOLs participate in the process of perception [2]. This in fact is the basis for the *pañcīkaran* rule for creating perceived *mahābhūtās* from the physical (nascent) ones in Vedic science. Now the question is as to how the EOLs, particularly the inner ones, M, I and E get dressed with the consciousness emanating from the soul. To this effect, the author has proposed earlier [2] a ‘*trikaran*’ rule (in analogy with the *pañci karan* rule for PMs) which takes care of dressings of inner EOLs M, I and E.

Note that the increasing consciousness means more and more intense meditation, characterized by the variable μ . Further, note that the dressing of an EOL or of an external object with consciousness tantamount as to how these entities evolve with the variation of meditation variable μ . In mathematical terms, there are two ways to study this aspect, namely as discrete evolution and as continuous evolution with respect to μ . While the author has studied both these ways earlier, here, however we restrict ourselves only to discrete evolution and that too of inner EOLs through a ‘*trikaran*’ rule. According to this rule, a dressed EOL is the sum of 50% of its undressed version and 25% of undressed version of each of the other two EOLs. Thus, for example, the first-order dressed versions, $\tilde{M}^{(1)}$, $\tilde{I}^{(1)}$ and $\tilde{E}^{(1)}$ respectively of M, I and E can be expressed in terms of the undressed (nascent) ones by simple algebraic relations of the form:

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$$\begin{aligned}\widetilde{M}^{(1)} &= \frac{1}{2}M + \frac{1}{4}I + \frac{1}{4}E, \\ \widetilde{I}^{(1)} &= \frac{1}{2}I + \frac{1}{4}E + \frac{1}{4}M, \\ \widetilde{E}^{(1)} &= \frac{1}{2}E + \frac{1}{4}M + \frac{1}{4}I.\end{aligned}\tag{A.1}$$

Similarly, for the second-order dressing one writes

$$\begin{aligned}\widetilde{M}^{(2)} &= \frac{1}{2}\widetilde{M}^{(1)} + \frac{1}{4}\widetilde{I}^{(1)} + \frac{1}{4}\widetilde{E}^{(1)}, \\ \widetilde{I}^{(2)} &= \frac{1}{2}\widetilde{I}^{(1)} + \frac{1}{4}\widetilde{E}^{(1)} + \frac{1}{4}\widetilde{M}^{(1)}, \\ \widetilde{E}^{(2)} &= \frac{1}{2}\widetilde{E}^{(1)} + \frac{1}{4}\widetilde{M}^{(1)} + \frac{1}{4}\widetilde{I}^{(1)},\end{aligned}\tag{A.2}$$

and in general for the n^{th} order dressing one writes in terms of $(n-1)^{\text{th}}$ order dressed EOLs as

$$\begin{aligned}\widetilde{M}^{(n)} &= \frac{1}{2}\widetilde{M}^{(n-1)} + \frac{1}{4}\widetilde{I}^{(n-1)} + \frac{1}{4}\widetilde{E}^{(n-1)}, \\ \widetilde{I}^{(n)} &= \frac{1}{2}\widetilde{I}^{(n-1)} + \frac{1}{4}\widetilde{E}^{(n-1)} + \frac{1}{4}\widetilde{M}^{(n-1)}, \\ \widetilde{E}^{(n)} &= \frac{1}{2}\widetilde{E}^{(n-1)} + \frac{1}{4}\widetilde{M}^{(n-1)} + \frac{1}{4}\widetilde{I}^{(n-1)}.\end{aligned}\tag{A.3}$$

It is not difficult to check that at every order of dressing, one has

$$\begin{aligned}\widetilde{M}^{(n)} + \widetilde{I}^{(n)} + \widetilde{E}^{(n)} &= \widetilde{M}^{(n-1)} + \widetilde{I}^{(n-1)} + \widetilde{E}^{(n-1)} \\ &= M + I + E,\end{aligned}\tag{A.4}$$

which implies that the entire process of dressing of EOLs goes in a self consistent manner, i.e. without affecting their nascent versions.

Several deductions from these simple relations have been analyzed by the author earlier (see, Ref. (2)). Interestingly, the conclusions drawn thereof, conform to many Vedic concepts. For example, one can now immediately consider a n^{th} order dressed micro-body as $\widetilde{M}^{(n)} = \{\widetilde{M}^{(n)}, \widetilde{I}^{(n)}, \widetilde{E}^{(n)}\}$. For the infinitely dressed case, i. e. for $n=\infty$, one obtains the infinitely dressed versions of M, I and E as $\widetilde{M}^{(\infty)}, \widetilde{I}^{(\infty)}, \widetilde{E}^{(\infty)}$. These later versions correspond to the cosmic mind, cosmic intelligence and cosmic desire as discussed in Ref. (3). Thus, as and when the meditation becomes more and more intense then, either one, two or all the three EOLs M, I and E tend to achieve the Supreme (cosmic consciousness) in accordance with the yoga of devotion, yoga of action and yoga of knowledge of Vedic science. For further details see Ref. (2).

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Sattwa, Rajas & Tamas (SRT) Factors in Depression

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ABSTRACT

The Bhagavad Gita embodies a bouquet of beautiful flowers of spiritual truths collected from the Upanishads. Many a times it has being misunderstood solely as a religious text and the sheer amount of psychotherapeutic concepts embodied in it has been neglected. The present study throws light on the concept of “Gunas” the basic personality attributes according to Indian philosophy that to a great extent determines the total behaviour patterns, and is referred to throughout in Gita. An attempt has been made through this explorative work to find out which of the three Gunas; Sattwa, Rajas and Tamas is predominant in patients diagnosed with depression. For this purpose a sample of 20 patients diagnosed with mild to moderate depression (ICD-10 criteria for depression) was selected from various adult psychiatric units and outpatient department of NIMHANS after screening them for current level of depression using the Beck’s Depression Inventory. A sample of 20 cases of normal was randomly selected from the general population using GHQ as the screening instrument. The age group included was 18-65 years with minimum educational qualification of 7th standard and with ability to read and comprehend English. Patients having a history of any organic conditions, protracted physical illness and psychotic illness were excluded from the study. Purposive random sampling was used to collect the sample. The SRT inventory was administered to the selected mild to moderate depressed patients and the sample of normals, and the ‘Triguna’ scores were obtained. Statistical measures like percentages, mean, standard deviation, t-test and correlations were employed to undertake a with-in group and between group analyses of the data obtained. The results of the study shows that the clinical population is predominantly Rajasic compared to the predominantly Sattwic disposition of the normal population.

Keywords: *Bhagavad Gita, Gunas, Depression, SRT Inventory*

TRIGUNA THEORY- An Indian Approach to Personality

The Sanskrit word guna (guna) has the basic meaning of "string" or "a single thread or strand of a cord or twine". In more abstract uses, it may mean "a subdivision, species, kind, and generally,

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quality. In Classical literature (e.g. Mahabharata, Bhagavata Purana and Bhagavad Gita), a Guna is an attribute of the 5 elements each with an associated organ (Sri Aurobindo, 1942):

1. Ether which has sound (shabda) for its Guna (and the ear for its organ). Aether (also spelled ether) is a concept used in ancient and medieval science as a substance. The aether was believed to be the substance which filled the region of the universe above the terrestrial sphere. Aristotle included it as a fifth element distinct from the other four, Earth, Water, Air, and Fire. Aether was also called Quintessence (from quinta essentia, "fifth element"). Its Platonic solid, according to Plato, was the Dodecahedron. The word aether in Homeric Greek means "pure, fresh air" or "clear sky", imagined in Greek mythology to be the pure essence where the gods lived and which they breathed, analogous to the aer breathed by mortals (also personified as a deity, Aether, the son of Erebus and Nyx). It corresponds to the concept of akasha in Hindu philosophy.
2. Air which has tangibility and sound for its Gunas (and the skin for its organ).
3. Fire which has shape or colour, tangibility, and sound for its Gunas (and the eye for its organ).
4. Water that has flavour, shape, tangibility, and sound for its Gunas (and the tongue for its organ).
5. Earth has all preceding Gunas, plus its own peculiar Guna of smell (and the nose for its organ).

SAMKHYA PHILOSOPHY

In Samkhya philosophy a Guna is one of three "tendencies": tamas, sattwa, and rajas. These categories have become a common means of categorizing behavior and natural phenomena in Hindu philosophy, and also in Ayurvedic medicine, as a system to assess conditions and diets. Guna is the tendency of the mind and not the state. For instance, Sattwa guna is that force which tends to bring the mind to purity but is not purity itself. Similarly Rajas is that force which tends to bring the mind to perform some action but is not action itself. The three words satvic, rajasic, and tamasic are used to describe the behaviour of objects in the universe. Every living creature can have any of the three tendencies satvic, rajasic, and tamasic. (Sri Aurobindo, 1942).

Sattwa (originally "being, existence, entity") has been translated to mean balance, order, or purity. This typically implies that a person with more of Sattwa has a positive or even orderly state of mind. Such a person is psychologically kind, calm, alert and thoughtful.. Indologist Georg Feuerstein translates sattwa as "lucidity". In Hindu philosophy, sattwa (Sanskrit for "pure", sometimes transliterated satva, sattwa, or other spellings) is the highest of the three gunas. Any object or creature can be called satvic if it has no source in evil and can cause only good to the world. Other words are rajasic and tamasic, which are used to denote things that are not satvic. In the Hindu Veda, Sattwa can also means existence, being, goodness, power, .. etc.

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For an object or food to be satvic, it must be uncontaminated and should not spread evil or disease in the world. On the contrary its presence must purify the surroundings. Thus when an individual consumes such a food, he must feel that he is eating pure food. The food should be healthy, nutritious and clean. It should also not weaken the power or equilibrium of mind. This idea disallows aphrodisiac or other drugs and intoxicants that can affect the mind. It also disallows food or objects obtained after killing or causing pain to a creature. This is because the object would then have source in an evil act. It also excludes stale and pungent-smelling food.

A person or creature can be called satvic if the creature has predominantly satvic tendencies. A satvic individual always works for the welfare of the world. He is always hardworking, alert and lives life moderately. He leads a chaste life. He eats moderately. He speaks the truth and is bold. He never uses vulgar or insulting language. He does not feel jealous nor is he affected by greed and selfishness. He does not cheat or mislead anyone. He does not even allow any evil tendencies to enter his mind. He has good memory and concentration. He also has keen interest in improving his spiritual knowledge, and spends time worshiping god or meditating. In the extreme state he may even perform penance or uninterrupted meditation. A satvic individual can be recognized if his mind, speech and actions synchronize. Manasa, vacha, karmana are the three Sanskrit words used to describe such a state. The satvic type can be again classified into seven subtypes (Rao et al, 1990) :

- Brahma type comprises purity, truth, self control, proper discrimination and knowledge, good understanding, power of exposition and repartee, possessing good memory, and lack of desire, anger, greed, conceit, delusion, envy and intolerance. The person treats others with equality.
- Rishi type comprises devotion to rituals, studies of scriptures, sacrificial offering, celibacy, hospitality, ingenuity, eloquence, understanding and good memory. Such a person is devoid of vanity, conceit, attachment, hatred, delusion, greed and anger.
- Indra type comprises of mind that commands power, speech, and conducts sacrifice. He is brave and energetic, valiant, blameless, and farsighted. He is always in pursuit of virtue, wealth and sense pleasure.
- Yama type is a person of propriety who does the right thing and is blameless, conscientious and possesses good memory. He is free from attachment to passion, hatred and delusion.
- Varuna type of person is valiant, courageous, clean and despises untidiness. He is devoted to sacrifices, is interested in aquatic games and uncomplicated work. He is given to the right way of anger and favour.
- Kubera type of person commands status, respect, luxury and plenty of associates. He is after virtues, wealth and desires, is clean and enjoys recreations. Both his anger and favour are reasonable.

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- Gandharva type of person is fond of dance, music, flattery, and is adept in poetry, history and epics; he is addicted to perfumes, cosmetics, garlands, fine garments, women and recreation and is free from envy.

Some of the people considered by Indians to be satvic are:

Holy men and bhaktas like Tulsidas, Tyagaraja, Tukaram, ancient rishis like Vashishta, Kashyapa, modern day sages like Ramana, Aurobindo, modern day leaders like Mahatma Gandhi, Rajagopalachari, divine beings in heavens.

Some objects that are considered satvic are:

Flowers, fruits, and food that are allowed as offerings to God, neem tree, the milk of a cow which has grown in good surroundings, is healthy and has been obtained after the calf of the cow has been fed well. In cases when the cow has been ill treated, it becomes sinful or evil to drink such milk. It must be remembered that the cow is sacred for the Hindus

Sentient foods or sattvic foods are foods which, according to Yoga, lead to clarity and equanimity of mind. Such foods include: water, fruit, cereal, bread, most vegetables, beans, nuts, grains, milk and milk derivatives (cheese, butter, cream, yogurt), honey.

Rajas (originally "atmosphere, air, firmament") leads one to activity. This type of activity is explained by the term Yogakshem. Yogakshem is composed of two words: Yoga and Kshem. Yoga in the present context is acquiring something that one does not have. Kshem means losing something that one already has. Rajas is the force that creates desires for acquiring new things and fears for losing something that one has. These desires and fears lead one to activity. Feuerstein translates rajas as "dynamism". In Hinduism, rajas, or rajo-guna is the quality of activity. If a person or thing tends to be extremely active, excitable, or passionate, that person or thing is said to have a preponderance of rajas. It is contrasted with the quality of tamas, which is the quality of inactivity, darkness, and laziness, and with sattwa, which is the quality of purity, clarity, and healthy calmness.

Rajas is described in the Samkhya philosophy, One of the Six Indian Schools of Philosophy. It is a force which promotes one or more of the following: (1) action; (2) change, mutation; (3) passion, excitement; (4) birth, creation, generation. Note that passion is a feeling (often) associated with the act of generating something new. Rajas is viewed as being more positive than tamas, and less positive than sattwa; except, perhaps, for one who has "transcended the gunas". The (eventual) fruit of rajas is pain, even though the immediate effect of rajas is pursuit of pleasure. Persons who are "movers and shakers" may be characterized as rajasic. Rajas provides raw get-up-and-go power: it propels "go-getters". Consuming food too quickly is rajasic.

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Stimulant foods, also called mutative foods, mutable foods or rajasic foods, are foods which tend to provoke mental restlessness. Such foods include: coffee, tea, cola drinks, chocolate, hot spices, salt.

Rajas can be again subtyped into the following six types (Rao et al, 1990) :

- Asura type of person has qualities of obstinacy, valour, jealousy, authority, obscurantism, terror, harshness, and self aggrandisement.
- Rakshasa type of person is intolerant, is always angry, cruel, gluttonous, fond of mutton, excessively sleepy, lazy and jealous of others.
- Pisacha type of person is voracious eater, easily controlled by women, secretly keeps company with women, is dirty, dislikes cleanliness, cowardly, threatens others, and is given to unusual recreation and food.
- Sarpa type of person is one who is brave when excited, otherwise timid, is sharp, indolent, arouses fear in others and is fond of food and recreation.
- Preta satwa type type of person is fond of food, miserable in character, jealous, avaricious and lazy.
- Sakuna type of person is passionate, fond of good food, fickle minded, intolerant and generous.

QUOTES FROM BAGVAD GITA

"O Arjuna, know that rajas is the source of lust and attachment and the producer of desire for sense gratification and sentimental infatuation; that enslaves the embodied consciousness by attachment to fruitive activities." (BG 14:7)

"O Arjuna, when greed, restless exertion with great endeavor for fruitive activities, agitation of the senses, incessant desire for sensual indulgence; when all these arise, rajas predominates." (BG 14:12)

"The result of virtuous activities in sattwa is declared purity, the result in rajas is misery, and the result in tamas is nescience." (BG 14:16)

"Arjuna said: what is it that incites one to commit sinful acts even against one's will as if compelled by force? Lord Krishna said: it is lust which becomes anger arising from rajas; know this lust to be insatiable, extremely sinful and the greatest enemy in this world." (BG 3:36-37)

Tamas (originally "darkness", "obscurity") has been translated to mean "too inactive", negative, lethargic, dull, or slow. Usually it is associated with darkness, delusion, or ignorance. A tamas quality also can imply that a person has a self-destructive or entropic state of mind. That person is constantly pursuing destructive activities. Feuerstein translates tamas as "inertia". In Hinduism and Buddhism, Tamas, or tamo-guna, is the lower of the three gunas. It is a force which promotes

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one or more of the following: (1) darkness, (2) death, (3) destruction, (4) ignorance, (5) sloth, (6) resistance. Note that sloth is related to death by analogy, and likewise, ignorance is related to darkness. Tamas is viewed as being more negative than either rajas or sattwa.

Tamas cannot be counteracted by rajas. It might be easier to counteract it by means of sattwa (action), and it might be more difficult to jump directly from rajas to sattwa. The result of a life led by rajas is demerit: demotion to a lower life-form. Tamas corresponds to what Buddhists call "delusion", one of the three roots of evil. Also, out of the five hindrances, two of them — sloth and doubt— are caused by rajas. Persons who are "couch potatoes" may be characterized as rajas. Overeating (i.e. gluttony) is rajas.

Static foods or rajas foods are foods whose consumption, according to Yoga, lead to a duller, less refined, state of mind, whether or not they are good for the body. Static foods include: meat, fish, eggs, onions, garlic, mushrooms, alcoholic beverages, stale foods.

Rajas type can again be subtyped into the following three types (Rao et al, 1990) :

- Pashava type of person is critical, unintelligent, disgusting in behavior and eating, sensual and fond of sleep.
- Matsya type of person is timid, unintelligent, gluttonous, passionate, irritable, fond of travelling, unsteady and fond of water.
- Vanaspatya type of person is lazy, gluttonous and dull.

QUOTES FROM BAGVAD GITA

"You should know, O Arjuna, rajas as the cause of delusion enslaving all embodied beings born of nescience; by negligence, listlessness and somnolence." (BG 14:8)

"O Arjuna, nescience, inertness, neglectfulness and also illusion; when these arise rajas predominates." (BG 14:13)

"Succumbing to death in rajas one takes birth among those beings attached to fruitive activities; similarly, dying in rajas, one takes birth from the womb of an animal." (BG 14:15)

NYAYA PHILOSOPHY

In Nyaya philosophy, twenty-four Gunas are enumerated as properties or characteristics of all created things.

1. rūpa, shape, colour;
2. rasa, savour;
3. gandha, odour;
4. sparśa, tangibility;
5. samkhyā, number;
6. parimāna, dimension;

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7. prthaktva, severalty;
8. samyoga, conjunction;
9. vibhāga, disjunction;
10. paratva, remoteness;
11. aparatva, proximity;
12. gurutva, weight;
13. dravatva, fluidity;
14. sneha, viscosity;
15. shabda, sound;
16. buddhi or jñāna, understanding or knowledge;
17. sukha, pleasure;
18. dukkha, pain;
19. icchā, desire;
20. dvesha, aversion;
21. prayatna, effort;
22. dharma, merit or virtue;
23. adharma, demerit;
24. samskāra, the self-reproductive quality;

THEORIES OF PERSONALITY IN INDIA

The first reference about the concept of personality is available in the oldest texts called ‘Vedas’ and ‘Upanishads’. According to the ‘Veda’ and ‘Upanishads’ the essence of human personality is ‘Atman (self)’, which is the same as the ‘Brahman’. Atman’ in conjunction with gross and subtle bodies becomes subject to experience of pleasure and pain. Its true nature becomes as if veiled. It becomes engrossed in five types of sheaths (Kosha) and the total personality is called ‘Jiva’. These five sheaths are found in the world of non-ego. The first two (‘annamaya’ and ‘pranamaya’) form the physical self. The next two ‘manomaya’ and ‘vijñanamaya’) form the mental self. The last (‘anandamaya’) is the spiritual or blissful self (Sharma, 1971). The ‘Vedas’ and ‘Upanishads’ also talk about the development of human life and basic elements of human personality.

In later stage when the codes of conduct are regulated in Smriti, the span of life was classified into different stages- ‘Brahmacharya’, ‘Grihasta’, ‘Vanaprastha’ and- ‘Sanyasa’. In addition, they prescribe the duties that one has to follow in these stages, called ‘Purusharthas.’ They are ‘Dharma’ (duty), ‘Artha’ (material gain), ‘Kama’ (desire), and ‘Moksha’ (liberation). These stages and duties are not strictly in a sequence, rather it depends upon the maturity of the mind and the responsibility that one has. These four stages of life are interwoven with the aims of life ultimately result in the development of an ideal personality.

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The study of personality in Buddhism does not deal with complex of postulated entities such as mind, ego, or unconsciousness, but is the congregation of five skandhas (series of events or groups). These are 'rupa', 'vedana', 'samjna' (conceptual knowledge), 'samskara' (coordination) and 'vijñana'. These five are transferred from one birth to the next and these constitute a temporary human identity.

Jainism speaks of personality in the form of 'Lesya'. They are of six types - black, blue, dovegrey, flaming red, pink/yellow and white (Krishnan, 1968). But a scientific theory of personality is developed in Indian medical texts. Ayurveda defines personality in terms of bodily humours. i.e. , 'vata' (wind), pitta' (bile), and 'kapha' (phlegm). There should be equilibrium of these three humours. Depending upon the change in the proportion of these three humours, specific type of personality arises. There is a possibility of seven types - 'vata, pitta, kapha, vata-pitta, vata-kapha, pitta-kapha and sannipada'. Ayurveda also has given sixteen types of personality on the basis of 'Guna theory' — 6 "rajas 7 sattwa and 3 "tamas. (Balodhi, 1987).

In the south, a parallel medical school called "Siddha" developed almost during the same time .It also speaks of three humours similar to Ayurveda — 'Vali' (wind), 'azhal' (bile), and 'iyain' (phelgm), called 'mukkutram' which has to be in the ration 4:2:1. Somatotyping ('thegaillakkanam : of six kinds — 'vali—azhal, vali—iyam, azhal-iyam, azhal-vali, iyam-vali, iyam-azhal (Somasundaram, 1986).

On physical plane if 'vata', 'pitta' and 'kapha' constitute the personality, a psychological significance is attached to mental attributes, classically known as 'Triguna' or three attributes — 'Sattwa', 'Rajas', and 'Tamas'.

Major contributors of this theory are 'Sankhya' and 'Ayurveda' schools. In following lines a detailed account is provided as to show how Indian theories of personality are viewed upon. Human personality, according to sankhya is the product of conjunction and interaction of a pure spirit (purusha) and matter (prakriti). The emprical self (jiva) is the composite of spirit and matter. These two are interdependent. The physical and mental organism attached to purusha is a manifestation of 'prakriti and without it the 'purusha' is inactive, as the organism is lifeless without it. On the whole personality has two mutually interdependent constituent — spirit ('purusha') and psychophysical apparatus. The psychophysical apparatus is called 'karana' which is the organ and functions. So, personality in sankhya' school is viewed as a result of the interaction between prakriti (matter) and purusha (self).

In their interaction, the first manifestation occurs in the form of mahat (conciousness), which confines to one individualism (ego) or ahamkara. This ahamkara further manifests in 'manas' (mind); 5 gross elements and 5 subtle elements due to divergent potentiality of 'Triguna. These Trigunas thus reflect the temperamental aspect of an individual.

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‘Triguna’ are mutually dependent and by virtue of one’s dominance over the rest of the two, the personality typing sets in with different temperament. All the things are composed of these three ‘Gunas’. “Gunas” are not merely distinct but in some measure are antagonistic in their nature. But these ‘gunas’ are never separate, and function as one like the lamp flame which is the result of the co operation of the wick, oil and fire.

These ‘gunas’ are in a state of perfect equilibrium in prakriti’ But even in this state of equilibrium they are continuously changing into one another. So long as the equilibrium is not disturbed, the changes produce no result, but as soon as the proportion of their interaction increases and the equilibrium is disturbed, the evolution takes place. On earth no two individuals are alike in their temperament and personality. Individuals differ in their cognitive, affective and conative aspects according to the interplay of ‘Triguna’. According to the predominance of any one of them, the individual is either ‘Sattvic’ , ‘Rajasic’ or ‘Tamasic’ (Balodhi & Singh, 1985).

‘Prakriti’ with its inevitable ‘Triguna’ is the primal matrix of the entire cosmos. The ‘Triguna’ or the three intertwined strands are both the constituent and changing conditions of nature (Padmasrinivasan, 1990).

A detailed comprehensive psychological explanation on ‘Triguna’ is also found in ‘Bhagvathgita’. Lord Krishna declares the three modes; goodness, passion and dullness, born of nature bind down in the body (Gita 14 V). This cant be explained in terms of the ‘mans’ psychic make-up determined by the predominance of any one of the three Gunas.

Aurabindo (1972) had interpreted ‘Sattwa’ ‘Rajas’ and ‘Tamas’ in more psychological fashion. For him ‘Rajas’ stands mid way between the two polarities of ‘Sattwa’ and ‘Tamas’ supplying energy to both, like a kinetic force. It is born of natures thirst for an unpossessed satisfaction.

METHODOLOGY

Aim

- To study the pattern of ‘Sattwa’, ‘Rajas’ and ‘Tamas’ factors in patients diagnosed with mild to moderate depression .

Objective

1. To find out the pattern of SRT factors (sattwa, rajas, tamas) among individuals with mild to moderate depression.
2. To find out SRT factors among normals.
3. To compare the pattern of SRT factors between the cases of mild to moderate depression and normals.

Tools Used

1. SRT factor-Inventory (Marutham, 1992)

The purpose of this inventory is to understand the disposition of 'Triguna' factors in individuals and is applied on the adult population. It consists of 120 items to be marked on a 4 point scale ranging from never true to always true, The 'sattwa', 'rajas' and 'tamas' factors are based on the 'Triguna' theory as it appears in the Sankhya Karika, Sarva Sidhanta Sangraha and Bagvathgita. The inventory requires 1 to 2 hours for administration and yields 3 scores. One each for each factor. Four point scale is preferred to odd number scale in order to control the mid point rating.

2. Beck's Depression Inventory (Beck et al., 1961)

This inventory authored by Aron. T. Beck is designed to measure the presence of depression in adolescents and adults. It produces a single score indicating the intensity of a depressive episode. It is a 21- item test presented in multiple choice format which purports to measure presence of degree of depression in adolescents and adults. Each of the 21 items attempts to assess a specific symptom or attitude which is consistent with the description of depression as available in the literature.

Total score Levels of Depression are

Score 05 – 09: These ups and downs are considered normal,

Score 10 – 18: Mild to moderate depression,

Score 19 - 29: Moderate to severe depression,

Score 30 – 63: severe depression,

Score Below 4: Possible denial of depression, faking good; this is below usual scores for normals.

Score over 40: This is significantly above even severely depressed persons, suggesting possible exaggeration of depression; possibly characteristic of histrionic or borderline personality disorders. Significant levels of depression are still possible (Groth-Marnat, 1990).

3. General Health Questionnaire (GHQ; Goldberg and Hiller, 1979)

The general health questionnaire (GHQ) is a measure of current mental health and since its development by Goldberg in the 1970s it has been extensively used in different settings and different cultures. The questionnaire was originally developed as a 60-item instrument but at present a range of shortened versions of the questionnaire including the GHQ-30, the GHQ-28 the GHQ-20, and GHQ-12 is available. The scale asks whether the respondent has experienced a particular symptom or behavior recently. Each item is rated on a four-point scale (less than usual, no more than usual, rather more than usual or much more than usual). When using the GHQ-12 it gives a total score of 36 or based on the selected scoring methods. The most common scoring methods are bi- modal (0-0-1-1) and Likert scoring styles (0-1-2-3). The GHQ-12 is a brief, simple, and easy to complete scale and its application in research settings as a screening tool is well documented. There is evidence that the GHQ-12 is a consistent and reliable instrument when used in general population samples.

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Sample

1. A sample of 20 cases was selected from the different adult psychiatric units at NIMHANS.
2. A sample of 20 cases of normals was selected from the general population.

Inclusion Criteria

1. Age group between 18 to 65 years.
2. Both males and females were included.
3. Diagnostic categories that were included are mild to moderate depressed patients as per ICD-10 criteria.
4. Education 7th standard and above.
5. Both English and Hindi comprehending subjects were included.

Exclusion Criteria

Patients having a history of any organic conditions, protracted physical illness and psychotic illness were excluded from the study.

Procedure

1. SRT inventory was administered to the selected mild to moderate depressed patients and the 'Triguna' scores were obtained.
2. Becks depression inventory (BDI) was administered to rate the level of depression in each case.
3. GHQ was administered to the normal group. Only those who obtained scores below the prescribed cut-off points were included in the normal sample.

Data Analysis

1. Descriptive statistics such as percentage, means and standard deviation were computed for the socio demographic variables such as age, sex, education and marital status. Using the statistical package for social sciences (SPSS), 't' tests and correlation was carried out.
2. To find out which factors among the SRT-factors is predominant among subjects diagnosed with mild to moderate depression, 't-test' was carried out between 'Sattwa' and 'Rajas', 'Sattwa' and 'Tamas' and 'Rajas' and 'Tamas' factors and the significance of the difference between the means was estimated.
3. To find out which factors among the SRT-factors is predominant among normals, 't-test', was undertaken between 'Sattwa' and 'rajas', 'Sattwa' and 'Tamas' and 'Rajas' and 'Tamas' factors and the significance of the difference between the means was estimated.
4. To compare the mean scores of the two groups on the independent variables of 'sattwa', 'rajas' and 'tamas', and to estimate the significance of difference of the means between the experimental group and the control group 't-test' was carried out.

SUMMARY OF RESULTS

The aim of the present study was to find out the nature of personality based on the personality factors as delineated in the Triguna theory from Indian philosophy. The objective was to find out the SRT factors (sattwa, rajas, tamas) among individuals with mild to moderate depression and the normal population and to study and compare the differences observed between the two groups. For this purpose the SRT Inventory developed and standardized by Marutham et al (1992) was used. A sample of 20 patients diagnosed with mild to moderate depression (ICD-10 criteria for unipolar depression) was selected from various adult psychiatric units and out patient department of NIMHANS after screening them for current level of depression using the Beck's Depression Inventory. A sample of 20 cases of normals was randomly selected from the general population using GHQ as the screening instrument. The age group included was 18-65 years with minimum educational qualification of 7th standard and with ability to read and comprehend English. Patients having a history of any organic conditions, protracted physical illness and psychotic illness were excluded from the study. Purposive random sampling was used to collect the sample. The SRT inventory was administered to the selected mild to moderate depressed patients and the sample of normals, and the 'Triguna' scores were obtained. Statistical measures like percentages, mean, standard deviation, t-test and correlations were employed to undertake a with-in group and between group analyses of the data obtained.

Results obtained show the following:

- The clinical group is higher on Rajas factor than Sattwa factor followed by Tamas factor.
- In the clinical population the difference between Rajas and Tamas factor is not statistically significant but both Rajas and Sattwa factors are significantly higher than Tamas factor.
- In the control group Sattwa factor is higher than the Rajas factor followed by Tamas factor. All the differences are statistically significant.
- In both the clinical group and the control group Sattwa and Rajas factors are significantly higher than Tamas factor.
- On the independent variable of 'Sattwa' the control group is significantly higher in comparison with the clinical group.
- On the independent variable of 'Rajas' the clinical group is higher than the control group though it is not statistically significant.
- On the independent variable of Tamas factor the clinical group is significantly higher in comparison with the control group.
- The males in the control group are significantly higher on the 'Sattwa' factor in comparison with the males in the clinical group.
- The females of the control group are significantly higher on the 'Sattwa' factor in comparison with the females of the clinical group.
- The males in the clinical group are significantly higher on the 'Rajas' factor in comparison with the males in the control group.

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- The females of the clinical group are higher on 'Rajas' factor in comparison with females in the control group, the difference is not statically significant.
- The males in the clinical group are significantly higher on 'Tamas' factor in comparison with the males in the control group.
- The females of the clinical group are higher on 'Tamas' factor in comparison with females in the control group, the difference is not statically significant.
- The married individuals in the clinical group are significantly lower on the 'Sattwa' factor in comparison with the married individuals in the control group.
- The married individuals in the clinical group is significantly higher on the 'Rajas' factor in comparison with the married individuals in the control group.
- The married individuals in the clinical group are higher on the 'Tamas' factor in comparison with the married individuals in the control group, but the difference is not statistically significant.
- The unmarried individuals in the clinical group are significantly lower on the 'Sattwa' factor in comparison with the unmarried individuals in the control group.
- The unmarried individuals in the clinical group are marginally lower on the 'Rajas' factor in comparison with the unmarried individuals in the control group, but it is statistically insignificant.
- The unmarried individuals in the clinical group are higher on the 'Tamas' factor in comparison with the unmarried individuals in the control group, but it is statistically insignificant.
- There is no significant correlation between the Sattwa factor, Rajas factor and Tamas factor and the BDI scores and also among themselves.

IMPLICATIONS

Contrary to the popular conception that Tamas is the root cause of most of the mental agonies experienced by the human beings. This study concludes that Tamas by itself may not be the cause of depression but a combination of Rajas and Tamas with Rajas predominating seems to be the source of depression. "Gita" says that anxiety for the fruits of actions is an unprofitable channel of vital human energy. Desire, anger and greed that leads to enterprise restlessness and endless longing for things not yet acquired and profits not yet gained is traced to be the source of individuals excessive attachments or affections, which is a basic characteristic of Rajasic attribute which finally leads to "Dukha".

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Test Anxiety and Academic Self-Concept of Students

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ABSTRACT

The study aimed at exploring the relationship of Academic self-concept and Test Anxiety of students and to find out the differences in these two variables with respect to some selected categorical variables. The objectives included (i) to find out the differences in Test anxiety and Academic Self-concept with respect to gender, stream of study and academic self-appraisal; and (2) to find out the relationship between Test anxiety and Academic Self-concept. For this purpose, 200 students studying various streams from a university were selected through stratified random sampling keeping gender and stream of study as strata. Academic Self Concept Scale by Liu, Wang & Parkins (2005) and Fried-Ben Test anxiety Scale (FTAS) by Friedman & Bendas Jacob (1997) were utilized to collect data. The data analysis revealed significant differences in test anxiety and academic self-concept of students with respect to their gender, course of study and academic self-appraisal. Also, significant inverse correlation was found between test anxiety and academic self-concept. Thus the study aligned with the existing literature. Implications and suggestions are posed as how the findings can be utilized for school consultation and in which direction the further research can be executed.

Keywords: *Test Anxiety, Academic Self-Concept, Gender, Course, Academic Self-Appraisal, University Students*

Since the beginning of formal education system, achievement in written exams has been given significant attention and is strengthened time and again. Students are in a need to reveal their uniqueness to the globalized job market. For the sake unique identity, parents and teachers insist students to perform well in exams. Also, students are self-determined to achieve high in exams. However, only a handful of students succeed in this journey and many end up in perceiving these tests as threats rather than as opportunities to excel and develop anxiety. The under achievement of academically pro-active students without any significant- irreversible cognitive disabilities is the current problem remaining unsolved in the campus settings. Since the academic evaluation through high stakes testing is perceived as crucial, anxiety clouds their performance. The anxiety

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associated with tests is termed as Test Anxiety in psychology literature and is defined as “a set of physiological, phenomenological and behavioural responses that accompany concern over possible negative consequences or failure in an exam or similar evaluative situations” by Sieber, O’Neil & Tobias (1977).

Test anxiety is a condition characterized by worries which arise in test situations with the symptoms of common anxiety. Giddiness, shivering of limbs, disturbed sleep, insecurity, elevated heart beat and feel of dread, include the symptoms of anxiety. These symptoms are demonstrated to hamper the test performance of students by altering cognitive, affective and conative processes related to testing situations. Testing practice is conceptualized to yield elevated anxiety and associated inverse influences on test performance. So far, various researches demonstrated that test anxiety is debilitating the academic performance of students. Test anxiety is demonstrated to be decreasing the student’s attention and result in increased errors (Ohata, 2005; Sarason, 1986). Culler and Holahan (1980) determined that high test-anxious students performed more poorly and had a higher dropout rate than low anxious students. Test anxiety research has its origin since 1900s (Zeidner, 1998) with a vast literature and diversified theoretical models. However, test anxiety is repeatedly found to be explored with related psychological constructs in academic context.

One such construct which holistically describes the academic attribute of students is Academic self-concept. Generally, self-concept is one of the most important constructs in psychology and allied social sciences that is well explored and demonstrated that enhancement of self-concept results in positive productivity in diverse settings (Branden, 1994; Marsh & Craven, 1997). In such a perspective, academic self-concept is defined as domain specific self-concept which explains about the way the students perceived and conceptualized about their ability in academic settings (Rosen, Glennie, Lennon, & Bozick, 2010). Academic self-concept is well related to academic achievements and it has been exposed in many studies (Trautwein, Ludtke, Koller, & Baumert, 2006; Hamacheck, 1995). The reciprocal relationship of academic self-concept and academic achievement is demonstrated by Guay, Marsh, & Boivin, (2003).

In all these light, the present study was aimed at exploring the test anxiety with academic self-concept and to see the differences in these variables with respect to few selected categorical variables namely gender, course of study, academic self-appraisal. The study was expected logically to be aligning with the existing literature in test anxiety and academic self-concept and categorical differences. Thus, the need to study the relationship between test anxiety and academic self-concept is conceptualized.

OBJECTIVES

1. To study the differences in test anxiety and academic self-concept of students on the basis of their gender.
2. To study the differences in test anxiety and academic self-concept of students on the basis of their course of study.

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3. To study the differences in test anxiety and academic self-concept basis of their academic self-appraisal.
4. To study the relationship between test anxiety and academic self-concept of students.

Hypotheses

1. There is a significant difference in the dimensions of test anxiety of students with respect to their gender.
2. There is a significant difference in the dimensions of academic self-concept of students with respect to their gender.
3. There is a significant difference in the dimensions of test anxiety of students with respect to their course of study
4. There is a significant difference in the dimensions of academic self-concept of students with respect to their course of study
5. There is a significant difference in the dimensions of test anxiety of students with respect to their academic self-appraisal
6. There is a significant difference in the dimensions of academic self-concept of students with respect to their academic self-appraisal
7. There is a significant relationship between the dimensions of test anxiety and the dimensions of academic self-concept of students.

METHOD

Normative survey method was implemented for data collection in the present study. Simple random sampling technique was followed to derive sample (n=200) of students aging 18-21 years, studying in a university. The derived sample was administered using (i) Fried-Ben Test Anxiety Scale (FTAS) by Friedman & Bendas-Jacob (1997) with cronbach alpha – 0.82. This scale has 26 items dispersed in three dimensions namely *social derogation*, *cognitive obstruction* and *tenseness* with 6-point rating scale starting from ‘1’ *does not characterize me* to ‘5’ *characterizes me well*. Social derogation refers to the worries of being socially belittled and criticized by noteworthy others after a failure on tests while cognitive obstruction specifies a disturbed concentration, difficulty in recall, troubles in effective problem solving, before or during a stringent test and tenseness refers to the physical and affective discomfort. (ii) Academic self-concept Scale by Liu, Wang & Parkins (2005) with cronbach alpha- 0.77. This scale has 19 items spread in two dimensions viz. students’ confidence and students’ effort. Respondents are supposed to rate how they perceive their ability in academic settings on a 4-point scale ranging from ‘1’ *strongly disagree* to ‘4’ *strongly agree*. The collected data were analyzed using independent sample ‘t’ test, one way analysis of variance (ANOVA) and Pearson’s product moment correlation.

RESULTS AND DISCUSSION

Table - 1: Test anxiety and Academic Self Concept of students on the basis of Gender via Independent sample 't' test.

===== Insert Table 1 here =====

From Table-1, it is inferred that the students do not significantly differ in *social derogation* ($t=1.434$) and *cognitive obstruction* ($t=0.264$) dimensions of test anxiety with respect to their gender. However, significant differences are found in the *tenseness* ($t=3.072$) dimension and also, while considering *test anxiety total* ($t= 2.076$). Female students scored higher (tenseness = 19.17 ± 6.71 , test anxiety total = 65.19 ± 18.86) than male students (tenseness = 16.38 ± 6.12 , test anxiety total = 60.36 ± 13.62). Additional inference from the mean and matching standard deviation scores, female students accounted for high proneness in test anxiety than male students. Therefore, it can be stated that test anxiety of students as a variable, has significant difference with respect to their gender. Few studies (Altermatt & Kim, 2004; Hembree, 1988) indicated this difference and suggested to look for the factors that determine a heightened test anxiety in female students. Hence, hypothesis (1) stating “*There is a significant difference in the dimensions of test anxiety of students with respect to their gender*” is accepted.

From the same table, it is also found that the students do not significantly differ in the dimensions of academic self-concept viz. *students' confidence* ($t=0.584$) and *students' effort* ($t=1.11$) with respect to their gender. Hence, hypothesis (2) stating “*There is a significant difference in the dimensions of academic self-concept of students with respect to their gender*” is not accepted.

Table - 2: Test anxiety and Academic self-concept of students on the basis of Course via One way Analysis of Variance

===== Insert Table 2 here =====

From table-2, it is observed that the students differ significantly in *social derogation* ($F=3.128$) and *cognitive obstruction* ($F=3.854$) dimensions of test anxiety with respect to their course of study. It is clear that the students belonging to humanities and education discipline scored least (19.72) in social derogation dimension, preceded by students of allied medical sciences (21.58) and those of business & applied arts (23.84). Comparatively, students studying science & technology courses showed a high score (24.32) in social derogation. This result can be attributed to the reason that students belonging to science & technology internalize the pressure of getting good marks in exams than the students from other courses. Also, they are more concerned about getting belittled by the significant others because of poor performance in exams. Further, it is inferred that in cognitive obstruction dimension, students of allied medical sciences (20.56) scored least, preceded by science & technology students (21.10) and humanities & education students (24.16). Students belonging to business & applied arts (24.72) scored high in cognitive obstruction dimension of test anxiety. It is inferred that students belonging to business

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& applied arts find difficult to think clearly in testing situation than their counterparts from other courses. Hence, hypothesis (3) stating “*There is a significant difference in the dimensions of test anxiety of students with respect to their course of study*” is accepted.

From the same table, it is also found that the students do not significantly differ in the dimensions of academic self-concept viz. *students’ confidence* ($F=2.016$) and *students’ effort* ($F=0.348$) with respect to their course of study. Hence, hypothesis (4) stating “*There is a significant difference in the dimensions of academic self-concept of students with respect to their course of study*” is not accepted.

Table - 3: Test anxiety and Academic self-concept of students on the basis of their Academic self-appraisal via One way Analysis of Variance

===== Insert Table 3 here =====

The students were asked to rate themselves based on their academic performance. The options given were (a) Above average, (b) Average and (c) Below average. From table-3, it is observed that the students differ significantly in *cognitive obstruction* ($F=10.182$) dimension of test anxiety with respect to their academic self-appraisal. It is clear that the students self-appraised as below average (28.57) scored high, followed by those who reported average (23.77). Students who self-appraised as above average (19.11) reported low in cognitive obstruction dimension of test anxiety. This is all about perception of one’s self regarding academic performance. Further, it is inferred that there is no significant difference found in social derogation ($F=1.954$) and tenseness dimensions of test anxiety with respect to their academic self-appraisal. It is clear that students who reported themselves as average exhibited high concern regarding others’ perspective and comparative those who reported themselves as below average did not worry about what others think in terms of exam performance. Hence, hypothesis (5) stating “*There is a significant difference in the dimensions of test anxiety of students with respect to their academic self-appraisal*” is accepted for cognitive obstruction dimension but not accepted for social derogation and tenseness dimensions of Test Anxiety.

Also, it is seen from the same table that students differ in the dimensions of academic self-concept viz. *students’ confidence* ($F=14.631$) and *students’ effort* ($F=4.179$) on the basis of their academic self-appraisal. In students’ confidence dimension, It is found that the students self-appraised as above average (28.77) in academics scored high, followed by those reported average (25.85) and the students who self-appraised as below average (23.43). It is of the logic that academic self-concept score of students is aligned with their academic self-appraisal. Also, it is found that in students’ effort dimension of academic self-concept, students self-appraised as above average (29.36) in academics scored high, followed by those reported average (27.61) and the students who self-appraised as below average (25.86). The descending order of mean scores implies that the single item opinion, academic self-appraisal of students is found significantly differing in their academic self-concept as per the logic. Hence, hypothesis (6) stating “*There is a*

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significant difference in the dimensions of academic self-concept of students with respect to their academic self-appraisal” is accepted. Thus, the results highlight the logical order and difference.

Table - 4: Relationship between Test anxiety and Academic self-concept of students via Pearson's product moment correlation

===== Insert Table 4 here =====

From table-4, it is inferred that significant inverse correlations are found between dimensions of test anxiety with that of academic self-concept except for Students' effort with social derogation ($r = -0.126$) and tenseness ($r = -0.138$). The *students' confidence* dimension of academic self-concept is inversely correlated with *social derogation* ($r = -0.166$), *cognitive obstruction* ($r = -0.528$), *tenseness* ($r = -0.206$) and with *test anxiety total* ($r = -0.415$). This result states that the students who lack confidence in their academic performance tend to exhibit more concern regarding belittled by significant others due to poor exam performance. Moreover these students tend to get disturbed in their cognitive activities necessary for test taking and suffer from bodily arousal. It is also seen that the *Students' effort* dimension of academic self-concept is inversely correlated with *cognitive obstruction* ($r = -0.443$) and *test anxiety total* ($r = -0.327$). The logical relationship expected before the study was found to be true. Academic self-concept comprises of the students' confidence and their efforts in academic tasks. It is vivid that the students who are confident and with good morale regarding their academics will not be having debilitating test anxiety. Thus, they would tend to assume test anxiety as a challenge to be faced rather having threat perception. The same applies for the students' effort dimension of academic self-concept where the students employing sufficient efforts in their academic tasks will be in the right path of performing well in exams. Hence, the inverse relationship found in the analysis is logical. Also, few studies quoted that the variables similar to students' confidence (Putwain, 2010), students' efforts (Culler & Holahan, 1980; Michaels, & Miethe, 1989; Pintrich, & De Groot, 1990), and self-concept in general (Williams, 1993) were substantiated on inverse correlations with test anxiety.

CONCLUSION

Test anxiety has been demonstrated in the literature as debilitating the test performance of students. Academic self-concept is the perception of students about their abilities in academic settings. Previous researches in the field of school psychology specified the importance of exploring the test anxiety of students with various psychological and demographic variables noteworthy for their academic settings especially with those facilitate their academic performance and equip them to deal with test anxiety. Hence the present study aimed at exploring test anxiety with academic self-concept. In order to verify the differences in the sample, demographic variables viz. gender, course of study and academic self-appraisal were included. From findings of this study, it is seen that the female students have higher tenseness than their male counterparts. Also, students belonging to science & technology discipline showed

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higher test anxiety than those studying business & applied arts, allied medical sciences and humanities & education. Gender and Course of study categories did not reveal any differences in academic self-concept but significant differences were found in academic self-concept with respect to academic self-appraisal. The test anxiety and academic self-concept of students are inversely correlated with test anxiety and academic stress. It is a certain call of school administrations to opt for school consultation with psychologists to deal with the worrying issue of test anxiety and poorly formed academic self-concept by applying suitable interventions. The school psychologists may reflect these findings while designing academic skill development programs for students. Further, it is suggested that the future directions of the present study include (i) in-depth analysis of interaction between test anxiety dimensions and academic self-concept using multivariate statistical operations such as multiple regression and path analysis, (ii) Developing an educational cum intervention program for assuaging test anxiety and enhancing academic self-concept and demonstrating its worth, and (iii) identification of other latent dimensions of test anxiety and testing their relationship with academic self-concept in order to propose an indigenous measurement model.

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The following tables need to be inserted at the corresponding spaces during formatting

Table - 1: Test anxiety and Academic Self Concept of students on the basis of Gender via Independent sample 't' test.

Variables & Dimensions	Mean (S.D)		't' value
	Male (n=100)	Female (n=100)	
Test Anxiety - Social Derogation	21.49 (7.79)	23.24 (9.39)	1.434 ^{N.S.}
Test Anxiety - Cognitive Obstruction	22.49 (6.61)	22.78 (8.78)	0.264 ^{N.S.}
Test Anxiety - Tenseness	16.38 (6.12)	19.17 (6.71)	3.072*
Test Anxiety Total	60.36 (13.62)	65.19 (18.86)	2.076*
Academic Self-Concept - Students Confidence	26.75 (4.05)	26.42 (3.94)	0.584 ^{N.S.}
Academic Self-Concept - Students Effort	27.69 (4.06)	28.38 (4.69)	1.11 ^{N.S.}

^{N.S.} - Not Significant at 0.05 level; * - Significant at 0.05 level/ (df=198)

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Table - 2: Test anxiety and Academic self-concept of students on the basis of Course via One way Analysis of Variance

Variables and Dimensions	Course (Mean Scores)				F (3, 196)
	Sc&T (n=50)	B&AA (n=50)	H&E (n=50)	AMS (n=50)	
Test Anxiety - Social Derogation	24.32 ^b	23.84 ^{a,b}	19.72 ^a	21.58 ^{a,b}	3.128*
Test Anxiety - Cognitive Obstruction	21.10 ^{a,b}	24.72 ^b	24.16 ^{a,b}	20.56 ^a	3.854*
Test Anxiety - Tenseness	17.84 ^a	18.82 ^a	17.78 ^a	16.66 ^a	0.906 ^{N.S.}
Academic Self-Concept - Students Confidence	27.26 ^a	26.00 ^a	25.80 ^a	27.28 ^a	2.016 ^{N.S.}
Academic Self-Concept - Students Effort	28.42 ^a	27.56 ^a	27.96 ^a	28.20 ^a	0.348 ^{N.S.}

1. T&Sc –Sciences&Technology; B&AA- Business & Applied Arts; H&E-Humanities & Education; AMS- Allied Medical Sciences.

2. ^{N.S.} - Not Significant at 0.05 level; * - Significant at 0.05 level

3. ^{a,b} - Tukey's Posthoc subsets (where $a < b$) / (df = 3,196)

Table - 3: Test anxiety and Academic self-concept of students on the basis of their Academic self-appraisal via One way Analysis of Variance

Variables and Dimensions	Academic Self-Appraisal (Mean Scores)			F (2,197)
	Above Average (n=56)	Average (n=137)	Below Average (n=7)	
Test Anxiety - Social Derogation	20.80 ^a	23.16 ^a	19.29 ^a	1.954 ^{N.S.}
Test Anxiety - Cognitive Obstruction	19.11 ^a	23.77 ^{a,b}	28.57 ^b	10.182*
Test Anxiety - Tenseness	16.75 ^a	18.40 ^a	13.71 ^a	2.698 ^{N.S.}
Academic Self-Concept - Students Confidence	28.77 ^b	25.85 ^{a,b}	23.43 ^a	14.631*
Academic Self-Concept - Students Effort	29.36 ^b	27.61 ^{a,b}	25.86 ^a	4.179*

1. ^{N.S.} - Not Significant at 0.05 level; * - Significant at 0.05 level

2. ^{a,b} - Tukey's Posthoc subsets (where $a < b$) / (df = 2,197)

Table - 4: Relationship between Test anxiety and Academic self-concept of students via Pearson's product moment correlation

<i>r</i>	Social Derogation	Cognitive Obstruction	Tenseness	Test Anxiety Total
Students Confidence	-0.166*	-0.528*	-0.206*	-0.415*
Students Effort	-0.126 ^{N.S.}	-0.443*	-0.138 ^{N.S.}	-0.327*

1. ^{N.S.} - Not Significant at 0.05 level; * - Significant at 0.05 level

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To Study the Stress among Adolescent

Dr. Santosh Kumar^{1*}

ABSTRACT

The current study reveals To Study the Stress adolescent there is the significant deference in the level of stress between primary and high school students, high school students are have more stress adolescents there is difference between male and female students there is no significant deference in the level of male and female students.

Keywords: *Stress, Adolescent, High School*

Weiten et al (2009) propose that stress that stress is an epidemic in the 21st century that commonly affects of us on a daily basis, when considering minor s from environmental conditions such as noise and pollution; Even though saving gadgets and self-help tools have increased substantially in the 20th century and people have more control over their lives, there is an increase of society and people have less free time. "We well define stress as any instances that threaten or are perceived to threaten one's well-being and hereby tax one'-s coping abilities "for example a person can no longer meet journal demands such as work or relationships they feel they do not have the eye beholder.

Stress is a part of day-to-day living. It is a common human phenomenon and of life as a college student. As college students you may experience stress beating academic demands, adjusting to a new living environment, or developing hand ships.

The stress you experience is not necessarily harmful. Mild forms of stress can act. as a motivator and energizer. However, if your stress level is too medical and social problems can result.

Stress affects most people in some way. Acute (sudden, short-term) stress ads to rapid changes throughout the body. Almost all body systems (the heart and good vessels, immune system, lungs, digestive system, sensory organs, and brain). ear up to meet perceived danger.

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To Study the Stress among Adolescent

Stress is simply a reaction to a stimulus that disturbs our physical or mental balance. In other words, it's an omnipresent part of life. A stressful event can either "fight-or-flight" response, causing hormones such as adrenaline and cortisol to surge through the body. A little bit of stress, known as "acute stress,"

This handout describes different ways of coping effectively with stress. In order to cope effectively, it is first important to know what situations you find and what the experience of stress is like for you. Specific strategies with stress are suggested, such as using relaxation techniques, talking with friends, exercising, and creative expression.

What is Stress?

Stress is a general term applied to various mental and physiological stress experienced by people in their lives.

Stress is a term people often use to describe a "feeling of pressure, strain, or tension. People often say that they are "under stress" or feel "stressed out" when dealing with challenging situations or event. Everyone encounters stressful actions. Sometimes the stress comes from something positive (like a new job, apartment, or new relationship) and sometimes from something negative.

The condition of stress has two components: physical, involving direct or bodily challenge and psychological, involving how individuals perceive circumstances in their lives. These components can be examined in three ways: one approach focuses on the environment, describing stress as a stimulus. In this approach, people's reference to the source or cause of their tension as being an event or set of circumstances such as having "a high-stress job." Physically or psychologically challenging events or circumstances are called stressors.

Researchers who follow this approach study the impact of a wide range of stressors, including (1) catastrophic events, such as tornadoes and earthquakes. (2) Major life events, such as the loss of a loved one or a job, and (3) chronic stressors, such as living with severe pain from arthritis.

CONCEPTUAL FRAME WORK

Concept of Stress:

It should be obvious from the opening Case why stress has been called an enemy of civilization.

The rapid pace of our lives, overcrowded living conditions, too many demands on our time, interferences with our personal ambitions and frustrating job conditions all contribute to the modern stress equation; But would we be better off without stress? That would be a life without challenge -no difficulties to surmount, no new fields to conquer, no reason to sharpen our wits or improving our abilities. Stress is an unavoidable part of living, because every organism faces

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challenges its environment and from its own needs. These challenges are "problems" it has to solve if it is to survive and thrive.

Stress is the pattern specific and non-specific responses and organism – access to stimulus events that disturb equilibrium and tax or exceed its ability to.

The stimulus events. Include a large variety of external and internal additions that collectively are called stressor. A stressor is a stimulus event that stresses a demand on an organism for some kind of adaptive response. The stress

Ones are composed of a diverse combination of reactions on several levels. Including physiological, behavioral, emotional and cognitive changes.

Doubt you have observed that some people experience one stressful event after there and do not break down. while others are seriously upset by every low-level stress. This happens because the effect of most stressors is not a direct one, but is

The cognitive appraisal of a stressor is one such moderator variable is it viewed as a threat or a challenge? The resource that is available to deal with that stressor is another Stressor, variable.

Role of Cognitive Appraisal

Before a stress response begins, a demand on the organism (stressor) must be cognized on some level and evaluated. Cognitive appraisal plays a central role. Defining the situation what the demand is, how big a threat it is, what resources has for meeting it, and what strategies are appropriate. Some stressor, such as injury or finding one's house on fire are seen as threats by almost anyone, many other stressors can be defined in various ways, depending on our overall situation, the relation of this particular demand to our central goals, our pretence for dealing with it, and our assessment of our competence. The action that causes acute distress for me may be all in a day's work for you.

Our appraisal of a stressor and of our resources for meeting it can be as Portent as the actual stressor in determining our conscious experience, what strategies we still see as appropriate, and how successful we still be. If we see a stressor as too much for us to deal with, we create a self-fulfilling prophecy we are likely to fail even if objectively we are capable of dealing quietly with the demand. Doctors have long known that a parent's attitudes can be as important as the physical condition in determining the course of the illness.

Cognitive appraisal may define a stressor as an interesting new challenge will be fun to test oneself against instead of as a threat. The experience may be of exhilaration, of being psyched up anticipating achievement.

Psychological Stress Reactions

Our physiological stress reactions are autocratic & predictable, built-in sources over which we normally have no conscious control. Not so our psychological reactions. They are learned and are heavily dependent on our perceptions and interpretations of the world and of our capacity for dealing with it. Include behavioral, emotional, and cognitive aspects.

Avoidal Patterns

The behavior of a person under stress depends in part on the level of stress befriended. Mild stress activates and intensifies biologically significant. Visitors, Mild stress makes an organism more alert; energies are focused & performance may improve. Positive behavioral informed, becoming vigilant to access of threat, seeking protection & support from others, & learning better strategies & coping skill.

Life is Little Hassles

Life is filled with low-level frustration. Your pencil breaks during an exam, get stuck in traffic, or you forget to set your alarm clock for an important appointment. To what extent do these minor irritations pile up to become stressors at play havoc with your health? The answer is to a bigger extent than you might again.

A psychiatrist distributed 100 questionnaires to the faithful waiting for the 2 A.M "bullet" train from Long island into Manhattan. From the 49 completed stationeries returned, it was determined that these average commuters had just doped down their breakfast. in less than 11 minutes, if. at all; were preparation 3 hours each day in transit; and in 10 years had logged about 7500 hours of time assuming two week vacations and no time off for illness. Two thirds of commuters believed their family relations were impaired by their commuting. nine percent experienced fatigue, 47 percent were filled with conscious 28 percent were anxious, and others reported headaches, muscle pains, rejection, and other symptoms of the long-term consequences of beating the rat e in the city by living in the country. (F. Charaton, personal communication, ring, 1973).

Catastrophic Events

Dining and dancing in a beautiful setting on a Friday evening sounds like a prescription for relieving the stress of a hard week of work. Unfortunately it became, instead, prescription for a disaster, creating great stress, when, in 1982 two aerial walk ways collapsed into the lobby of a hotel in Kansas City, Missouri. Immediately affected were the 2000 people who were attending a tea dance, more than 300 of whom were killed or injured. Also experiencing stress were 1000 rescue workers, who worked more than 10 hours just to get through the rubble to all the victims. Another 5000 people were less directly affected: workers at the hotel, personnel at hospitals in the area, and friends and families of victims (Gist & Stolz, 1982). No count could be made of those who were affected in the immediate community and to television viewers across the nation,

To Study the Stress among Adolescent

as people tried to deal with the senselessness of the event and the anxieties it created about the possibility of other such disasters elsewhere.

Researchers have found that five stages occur predictably in people's responses to disasters: Typically, there is a period of shock and even "psychic numbness," during which people cannot fully comprehend what has happened. The next phase involves what has been called "automatic action"; people try to respond to the disaster and may behave adaptively, but with little awareness of their actions and poor later memory of the experience.

In the next stage, people often feel great accomplishment and even a positive sense of communal effort for a shared purpose. Also in this phase, people feel weary and are aware that they are using up their reserves of energy. During the next phase, they experience a letdown; their energy is depleted and the impact of the tragedy is finally comprehended and felt emotionally. An extended period of recovery follows, as people try to rebuild and to adapt to the changes brought about by the disaster. (Cohen & Ahearn, 1980)

Knowledge of these typical reaction stages predicting a model that is helpful in predicting people's reactions when disaster strikes, enabling rescue workers to anticipate and help victims deal with the problems that arise. Responses to such varied events as floods, earthquakes, airplane crashes, and factory explosions have all been shown to fit this model of disaster reactions.

Chronic Societal Sources of Stress

What of environmental stressors that part of the ongoing circumstances of life: overcrowding, economic recession, fear of nuclear war? What cumulative effect do such stressors have on us.

COPING STRATEGIES:

If living is inevitably stressful and if too much stress can disrupt our lives, and even kill us we need to learn how to cope so that we can survive. Coping refers to attempts to meet environmental demands in order to prevent negative consequences (Lazarus and Folkman, 1984). There are many different coping techniques, some of which are more effective than others for a given person in a given situation.

Because animals in the wild must adapt biologically to their environment, their mechanisms for coping are coded in their genes and limited by the slow timetable of evolutionary processes. Human beings have a tremendous potential for adapting not only biologically, over generations, but psychologically, within a lifetime even within a short period of time if they want to change.

In this final section of the chapter we will look at a variety of strategies that people use to reduce the amount of stress they experience and to lessen its harmful effects. Some strategies are ones that most of us use naturally and habitually, whereas others are special techniques that can be

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learned. Some strategies are individual ones, to be done on one's own in contrast social strategies depend of the presence of other people.

Problem focused versus emotion focused coping

Coping strategies can be grouped into two main types, depending on whether the goal is to deal with the problem (problem-focused) or to lessen the discomfort of it (emotion-focused).

The first main approach includes any strategy to deal directly with the stressor whether through overt action or through realistic problem-solving mental emerged was an indecisive coping style that was likely to promote a sense of personal inadequacy which, in turn, was a source of more depression. (Coyne et al. 1981)

The ego defense mechanisms discussed in chapter 12 (such as repression, denial of reality, and rationalization) are familiar emotion regulating approaches. Undertake unconsciously to protect us appraise situations in less self-threatening ways. They lead to coping strategies that are essentially aimed at self-protection rather than at solving problems. At times, however, they cause us to distort reality and, when overused, can lead to maladaptive coping.

Altering Bodily Reactions

Stress equals tension for many people. This often means tight muscles, high blood pressure, constricted blood vessels in the brain, and chronic over secretion of hormones. Fortunately; many of these tension responses can be controlled by variety techniques some ages old, some quite new.

Relaxation

Relaxation through meditation has ancient roots in many parts of the world. For centuries in eastern cultures, ways to calm the mind still the body's tensions have been practiced. Today Zen discipline and yoga exercises from Japan and India are part of daily life for many people both there and, increasingly, in the west. In our own culture, a growing number of people have been attracted to work shops and therapy in relaxation training and to various forms of meditation.

Just as stress is the nonspecific response of the body to any demand made on it, there is growing evidence that complete relaxation is a potent anti-stress response. The relaxation response is a condition in which muscle tension, cortisol.

Modifying Cognitive Strategies:

A powerful way to handle stress more adaptively is to change our evaluations of stressors and our self-defeating cognitions about the way we are dealing with them. We need to find a different way to think about a given situation, our role in it and the causal attributions we make to explain the undesirable outcome.

To Study the Stress among Adolescent

Reappraising Stressors:

The close connection between cognitive appraisal and the primary of autonomic nervous system arousal has been demonstrated in studies where the cognitive appraisal was systematically varied.

When subjects watched an upsetting film showing vivid circumcision rites in a primitive tribe, they were less physiologically aroused when the film had a sound track that either denied the dangers or discussed them in an intellectual, detached way. (Speisman et al., 1964)

In another study, subjects viewing a film of an industrial accident were less aroused if they were "emotionally inoculated" by being warned in advance that it was coming and given a chance to imagine the threatening scenes beforehand. This is cognitive preparation, which gave them an opportunity to rehearse mentally both the stress full episode and their coping.

Supportiveness of the environment

Life in societies is the most powerful weapon in the struggle for life thus it was that thousands of years before humans appeared association of animals in social units was preparing the way for human society (Chapin, 1913)

We all cope with stress as individuals, but for a lifetime of effective coping and for the continued success of our species, it is necessary for us to band together with our families, friends, and neighbors (at home and throughout our small planet). Isolation can lead to inadequate coping and is itself the cause of much stress. Much contemporary research points to the improvement in coping that can come from being part of a social support network and from living and working in a healthy environment.

Social support network

Social support refers to the resources provided by other persons. These resources can include material aid, socio-emotional support and informational aid. The persons who can provide these resources for an individual are those with whom he or she has significant social relationships such as family members, friends, coworkers and neighbors.

There is now a sizable body of evidence showing that the presence of social support makes people less vulnerable to stress. When people have other people they can turn to, they are better able to handle job stressors, unemployment, marital.

REVIEW OF LITERATURE

1. Hamiton, Sandra, Fagot Beverly (1998)

Chronic stress and coping styles: A comparison of male and female undergraduates.

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Male and female coping behaviors were compared in order to test the theory that men use more instruments coping strategies more frequently than women, who are thought to use emotion focused coping solutions. We interviewed 51 female and 39 male first year undergraduates by telephone three times a week for 8 weeks. Using an inventory developed for 28 chronic stressors. Analyses of variance were used to test gender differences in frequency of daily stressors, concomitant perceptions of stress, and utilization of problem-solving behaviors. The majority expectations.

2. Compas, Bullce E. (1987)

Coping with stress during childhood and adolescence. In the article. Research on how children and adolescents cope with stress and coping's role in reducing the adverse psychological states associated with stress is reviewed. Child and adolescent coping is reflected in seven different lines of research-infants' responses to maternal separation, social support, interpersonal cognitive problem-solving, coping in achievement contexts, Type A behavior pattern in children, repression-sensitization, and resilience to stress. A variety of coping resources, styles, and specific strategies are important. As well as attempts to deal with adverse emotions associated with stress.

3. Tein. Jemi-yun; sandier, Irwin N ;zautra alex j. (2000)

Stressful life events, psychological distress, coping, and parenting of divorced mothers: A longitudinal study.

From the journal of family psychology this was a prospective longitudinal study of the relationship among life stress, psychological distress, coping, and parenting behaviors in a sample of divorced custodial mothers. First, the differential effects of major events and daily stressors on psychological distress and parenting were explored. Second, the mediational links among stress, distress, and dimensions of parenting behaviors were studied. Third, coping strategies were studied as moderators of the relationship between distress and parenting. The results showed that both major and small events had significant effects on parental distress, with effects of daily negative events being greater than those of major events. Parental distress mediated the relationship between stressful life events and parental acceptance of their children's behaviors. Parental coping strategies moderated the relationship between mother's psychological distress and mothers discipline practice.

4. Valentiner, David P.; Foa, Edna B, Riggs, David S.; Gershuny, Beth S(1996)

Coping strategies and posttraumatic stress disorder in female victims of sexual and nonsexual assault.(From the journal abstract) The coping behaviors and (posttraumatic stress disorder [PTSD] symptoms of 215 female assault victims (103 rape victims and 112 nonsexual assault victims) were assessed within 2 weeks following the assault (time 1), and 133 of them (62%) were followed up 3 mo later (time 2) . post trauma symptom severity significantly decreased during the 3-mo study period, but PTSD severity levels at times 1 to 2 were highly correlated. Three

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constructed on the basis of exploratory factor analyses: mobilizing support, positive distancing, and wishful thinking. Three mo post assault, rape victims showed higher levels of wishful thinking and PSTD their nonsexual assault victims. Wishful thinking three mo post assault, rape victims showed higher levels of wishful thinking association and positive distancing a negative association with PTSD severity, controlling for assault rape, initial levels of PTSD severity, and other coping strategies.

METHODOLOGY

Statement Of The Problem:

- To study the stress among adolescents.

Variables:

I. Independent variable

- a) Adolescents
- b) Gender Male and Fem ale

II. Dependent variable

Stress

Objectives:

1. To study the level of stress among adolescents.
2. To study the level of coping strategies among adolescents.
3. To study the level of coping strategies. among male and female adolescents.
4. To student the level of· stress among male and female adolescents.

Hypothesis:

1. There is significant difference in the level of stress between adolescents.
2. There is significant difference in the level of coping strategies between adolescents.
3. There is significant difference in the level of coping strategies between male and female students.
4. There is significant difference in the level of stress male and female students.

Tools:

I. Singh personal stress source inventory:

Singh personal stress source inventory is · developed by Arunkumar Singh and -Ashish Kumar Singh and Arpana sing. Which is consisting of 35 items distributed dimension of Singh personal stress source inventory.

The inventory has three response categories namely seldom, sometime, frequently.

The scoring of SPSSSI is· very simple. Every item marked as seldom by the tested is given a score of (1), marked as sometime item is given a coat of (2) and marked as frequently a score of (3)

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unmarked items are given a score of zero. Higher the score, the higher is the magnitude of personal stress likewise, lower the score, lower is the magnitude of personal stress, the maximum score on SPSS is 105.

II. Coping strategies scale:

Coping strategies scale is developed by prof. A.K. Srivastava which is consisting of 50 items distributed dimension of coping strategies scale. The inventory has five responses categories namely Never, Rarely, Sometimes, Most of the time, Almost always.

The scoring of coping strategies scale. Every item marked as Never item is given a score of (0), marked as Rarely item is given a score of (1), marked as Sometimes item is given a score (2). Marked as most of the time item is given a score (3) and marked as Almost always item is given a score (4).

High scores on Avoidance coping strategies would indicate deficient or dysfunctional coping, and low score would indicate efficient or functional coping.

DISCUSSION AND CONCLUSION

Discussion:

The present's Studying, designed, to study the stress and coping strategies among adolescents. There are four hypothesis were formulated to test the present study result are discussed in the following table.

Table No. 01, Showing The Level Of Stress Among Adolescents.

Faculty	Men	SD	t-value
Primary	60.04	5.28	5.36**
High school	65.05	4.82	

**significant at 0.01 level

Table no: 01 showing the level of stress among primary and high school The mean score of primary students is 60.4 and SD us 5.28 and that of high school student is 65.5 and 4.82. The calculated t-value is 5.36 which is significant at 0.01 level of significance. This indicates that there is significant difference in the level of stress between primary and high school students. Primary student are having more stress compare to high school students.

Table No. 02, Showing The Level Of Coping Strategies Among Primary And High School Students

Faculty	Men	SD	t-value
primary	85.00	14.45	6.43**
university	101.74	11.45	

**significant at 0.01 level

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Table no: 01 showing the level of stress among Primary and high school students. The mean score of Primary students is 85 and SD is 14.45 and that of High school student is 101.74 and 11.45. The calculated t-value is 6.43 which is significant at 0.01 level of significance. This indicates that there is significant difference in the level of coping strategies between Primary and High school students. Primary student are having low coping strategies compare to High school students.

Table No. 03, Showing The Level Of Coping Strategies Among Male And Female Primary And High School Students.

	Primary				High school	
	Mean	SD	t-value	Mean	SD	t-value
Male	80.32	15.10	2.43*	104	10.06	1.52NS
Female	89.68	11.97		99.48	11.00	

*Significant at 0.01 level

Table no: 03 showing the coping strategies among male and female Primary and high school students.

The mean score of Primary male student is 80.82 and SD is 15.10 and that of Primary female student is 89.68 and 11.97. The calculated t-value is 2.43 which is significant at 0.05 level of significance. This indicates that there is significant difference, in the level of coping strategies between Primary male and Primary female student. Primary female student are having low coping strategies compare to Primary female students.

The mean score of High school male student is 104 and SD is 10.06 and that of High school female students is 99.48 and, 11.00. The calculated t-value is 1.52 which is not significant at any level. This indicates that there is no significant difference in the level of coping strategies between High school male and High school female students. When mean score is seen the High school female students are having low coping strategies compare to High school male students.

TABLE NO. 04, Showing the level of stress among male and female Primary and high school students.

	Primary			High school		
	Mean	SD	t-value	Mean	SD	t-value
Male	59.72	4.41	0.90NS	66.28	5.60	1.15NS
Female	61.08	6.22		64.72	3.33	

Table No.04 Showing the level of stress among male and female Primary and high school students

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The mean score of Primary male student is 59.72 and SD is 4.41 and that of Primary female student is 61.0 and 6.22. The calculated t-value is 0.90 which is not significant at any level. This indicates that there is no significant difference in the level of stress between Primary male and Primary female students when mean score is seen Primary female student are having more stress compare to Primary male students.

The mean score of High school male student is 66.28 and SD is 5.60 and that of High school female student is 64.72 and 3.33. the calculated t-value is 1.15 which is not significant at any level: This indicates that there is no significant difference in the

1. level of stress between High school male and High school female students. High school male student are having more stress compare to High school female students.

CONCLUSION:

1. There is significant difference in the level of stress between Primary and High school students. High school students are having more stress than Primary students
2. There is significant difference in the level of coping strategies between Primary and High school students. Primary Student are having low coping strategies then High school Students.
3. There is significant difference in the level of coping strategies between Primary male and Primary female students.
4. There is no significant difference in the level of coping strategies between High school male and High school female students.
5. There is no significant difference in the level of stress between male and female Primary and high school students.

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Predicting the Probability of Divorce Occurrence by the Index of Family Function

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ABSTRACT

This study is designed to analyze the predicting the probability of divorce in women through family function among married student from Azad Abhar University. This study is base on correlation and randomly sampled. The targeted population for this study were 200 voluntary participant of married female student. This study includes family functional survey, Mac Master (FAD), and the instability of marriage (Probability of divorce) survey that data collected from the surveys were analyzed by Pearson correlation coefficient, and Multiple regression analysis. Findings from this study shows that there is a relation between family functions and probability of divorce.

Keywords: *Family Functions, Occurrence Of Divorce*

Divorce is one of the crises that in most cases jeopardize the mental health of the family. With regard to various kinds of divorce including emotional, psychological, economic, social, legal, parental and their respective damages that threatens the family, conflict and divorce and issues related to that are of significant importance. But more important than that is the effects and consequences that divorce exerts on society and that it is together with disintegration of the family's foundation with short-term and long-term financial, legal, individual, and social effects for children and adults. Research has shown that the function of family is effective in creation of marital conflicts. Moreover, the evidences represent that the quality of family relationships is different in divorcing and un-divorcing families as such that more conflicts are observed in divorcing families (Lindesey, colwell, frubull & Mackinnon, Lewis, 2006).

Reaching a healthy society clearly requires health of the family and reaching a healthy family requires its people to have mental health and appropriate relationships with each other; therefore, ensuring the health of the members of the family and their relationships undoubtedly exert

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positive effects on society and it can be said that family function has direct and significant effect on the function of society.

In this study family function is investigated from various perspectives like Mc Master's perspective. In Mc Master's perspective, family function involves seven dimensions that are as follows: problem solving dimension, communications, roles, emotional responsiveness, emotional dependency, control of behavior and general function that to improve and increase the functional level this study aims to determine prediction of possibility of occurrence of divorce in women by the index of family function.

Ethical Principles

As it is known, the Men who have sex with men (MSM) are the minority, therefore, they can be considered as the vulnerable members of the society. Further, obtaining the written informed consent is more important for this population. It means that, the possibility of “being informed” or “acting based on the will” is significantly less among the vulnerable members of the society. In this study, the informed consent was obtained without coercion, threat, enticement and seduction and their decision to refuse or accept to participate in the study were respected. It was also tried that the research methods do not contradict with the religious and cultural principles of the participants and the participants were respected in all stages of design, implementation and reporting in terms of human dignity, respect and protection of their physical and mental integrity so that conducting the research would not delay in the process of medical care for the participants.

METHODOLOGY

This study was a kind of survey and the methodology used was descriptive and of correlational type. The statistical community of this study was all the married student women that were busy studying in Azad university of Abhar in second term of 1392-1393. In this study 200 people were selected from students in dormitory by random sampling. Questionnaires of this study were extent of instability of marriage (divorce) with Corn bache's alpha reliability of 93% and validity of 70% and Mc Master's questionnaire (FAD) with Corn Bache's alpha reliability index of 83% and subscales of 90% that in another study for changing the internal reliability of this scale, Shtain (2001) estimated the minimum alpha index of scales as 75%.

Statistical analysis

First descriptive statistics was used and the data of the research were brought in respective tables and in the second part statistical analysis was done. In order to analyze the data of the research, with respect to nature of it, Pearson correlation test and multivariable regression analysis was used.

RESULTS

Table1. Descriptive index of the research variables

Statistical indices of the variable		number	mean	SD	Minimum extent	Maximum extent
Family function	Problem solving	180	16.27	4.26	9	24
	communications	180	19.87	5.03	8	27
	roles	180	25.67	6.69	11	36
	Emotional support	180	18.00	5.54	7	26
	Emotional intercourse	180	17.97	4.32	10	27
	Control of behavior	180	17.80	6.88	10	33
	General function	180	37.13	6.90	25	50
	Family function(total score)	180	152.70	28.65	101	207
Instability of marriage(possibility of occurrence of divorce)		180	25.30	6.13	15	39

Table 1 represents descriptive indices in research variables that among them the mean has central tendency and standard deviation has tendency toward the distribution of scores.

Table 2. Normality test of the distribution

Statistical indices of the variable		Kolmogorov Smirnov Z	Significant level
Family function	Problem solving	1.19	0.11
	communications	0.94	0.33
	roles	1.28	0.07
	Emotional support	1.29	0.07
	Emotional intercourse	0.85	0.46
	Control of behavior	0.94	0.33
	General function	1.23	0.09
	Family function(total score)	1.11	0.16
Instability of the marriage(the probability of occurrence of divorce)		0.85	0.46

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As it can be inferred from the findings of the table 2, since the obtained significant level in K-S for the respective variables of the study is more than criterion of 0.05, therefore it can be said that the distribution of the variables in statistical sample has normal distribution. Therefore the research hypotheses are examined by parametric tests of Pearson correlation test and regression analysis.

Moreover the normality of the distribution of the variables is examined by appropriate statistical test.

Table3. The results of Pearson correlation coefficient between variables of family function and possibility of occurrence of divorce

variables		Solving problem	communications	roles	Emotional support	Emotional intercourse	Control of behavior	General function	Family function
Possibility of occurrence of divorce	correlation	0.775**	0.561**	0.558**	0.027**	0.709**	0.208**	0.6444**	0.651**
	significance	0.001	0.001	0.001	0.723	0.001	0.005	0.001	0.001

**significant correlation at the level of 0.05

As the results of table 3 shows, through Pearson correlation coefficient, there is a significant relationship between the variables of solving problem, communications, roles, emotional intercourse, control of behavior, general function, total score of family function and possibility of occurrence of divorce in students at the level of 0.01. Moreover since the relationship is positive and significant, it can be concluded that however the individuals take higher scores in family function variable and have inappropriate conditions(note that in the questionnaire of family function, high score represents inappropriate condition and poor function of the family and vice versa), the possibility of divorce among them is more and vice versa.

In the following sections we investigate the prediction of possibility of occurrence of divorce:

Table4: The results of regression coefficients and coefficients of estimation

variable	Multiple correlation R	Coefficient of determination R ²	Adjusted coefficient of determination R ²
Multi-variable regression	0.890	0.791	0.783

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As the results of regression analysis shows the extent of multiple-regression coefficient among the variables family function and its subscales and possibility of occurrence of divorce is 0.890. Moreover the subscales of family function can predict 79.10 percent of variances related to variable of possibility of occurrence of divorce. To determine the significance of these variances, variance analysis was used.

Table5. Regression analysis of dependent variable of possibility of occurrence of divorce

Model	Sources of variance	Aggregates of square	Degree of freedom	Mean of squares	F	Significant level(p)
Multivariable regression	regression	5328.74	7	761.249	93.188	0.0001
	leftover	1405.06	172	8.169		
	Total	6733.8	179			

Regarding table 5, the results of regression analysis shows that amount of F=93.18 are significant at the level of 0.99.

Table6. The results related to standard and non-standard coefficients in the research model.

Levels	Non-standard coefficient		Standard coefficient	t	Levels of significance (p)
	B	Extent of Error	Beta		
Stable amount	41.153	1.535		26.803	0.0001
Solving problem	0.849	0.105	0.59	8.073	0.0001
communications	0.231	0.079	0.19	2.912	0.004
roles	0.21	0.066	0.23	3.193	0.002
Emotional support	0.528	0.05	0.477	10.599	0.0001
Emotional intercourse	0.563	0.134	0.396	4.208	0.0001
Control of behavior	0.053	0.039	0.059	1.352	0.178
General function	0.042	0.058	0.048	0.728	0.467

The possibility of occurrence of divorce (dependent variable)

As it was shown in table 6 variables of solving problem, communications, roles, emotional intercourse and emotional support in level of 0.01 has significant relationship with variable of possibility of occurrence of divorce because the calculated significant level is lower than criterion amount of 0.01 and the obtained t is also meaningful. The results of regression analysis

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shows that among the independent variables, solving problem, communications, roles, emotional intercourse and emotional support can positively predict variable of possibility of occurrence of divorce with reliability of 99% among students. Therefore the research hypothesis is confirmed and null hypothesis is rejected.

DISCUSSION AND CONCLUSION

This research represented that there is positively significant relationship between the variables of family function and variable of probability of occurrence of divorce among students and taking higher scores in the variable of family function represents inappropriate situation of the family and as the result the probability of occurrence of divorce among them is more. The obtained results from this study is conforming with the results of research of Rahimi Nejad, Paknejad(1393), Chaboki(1392), Bakhshipour et al.(1391), Mohammadifar, Talebi, Seyyed Tabatabayee(1389).

Therefore the factors of family function that includes solving problem, communications, roles, emotional responsiveness, emotional intercourse, control of behavior and general function are positive answer to solve conflicts especially when the members need help. Through examining the findings of this research we reached to this conclusion that with reinforcing and addressing each of these factors we can improve the family function and in reverse the weakness of each of these factors leads to decreasing of quality of family function (Erion et al., translated by Dehghani and Abbasi (1391). This is because family function is sharing effort to produce and maintain balance in the family and a family with appropriate function is like a game system that its members are connected emotionally, however to expand individual identity they should be encouraged to create an atmosphere full of love and un-doubtable acceptance that results in lower levels of family conflicts. Those families who have full range of expression of feelings, from happiness to sadness and anger, are healthy and those families which have problem in expression of their feelings and have inflexible patterns of emotions are considered unhealthy because a healthy family is a family in which couples can discuss important issues of themselves and welcome any positive change (Right and Li Hey, 1380). According to Fishro Sprange(1978) the sources showed that the intervention of the family function can be effective strategy to balance family discipline in a form that members know in critical time and for solving problems ahead and pressures that creates and increases the intention of divorce like occupational pressures, familial pressures, cognitive misunderstanding, sexual issues, monotony in life, inattention to family issues, not knowing fundamental needs of men and women, mental and physical bore, role of personality, emotional and mental disorders which issues to be discussed and how to discuss them and to use which realistic plans and not to go far or less in cognitive and emotional encountering with issues. This is very important and thus the extent of their desire and tendency to divorce and separation that according to scholars and sociologists is one of the complicated and multidimensional social and familial disorders is reduced.

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With respect to conducted studies when the family function and (its comprising factors) is in appropriate and adjusted level, the extent of desire to divorce and tendency of couples to separation is reduced and vice versa and this is the result of findings of present study.

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Conflict of Interests

The author declared no conflict of interests.

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Eye Colour: A Physical Trait Correlates with Personality & Mental Health

Rupali Chandola^{1*}

ABSTRACT

Background: Eyes are the window to the soul, eye is so closely linked neurologically to the brain that you might call it the only part of our brain you can see from the outside. It seems to hold vital clues to our brain function. Therefore the study was conducted to know the association between colour of eye relate with personality and mental health **Methods:** Study examined personality of 300 subjects selected purposively. The study was conducted on 143 were normal subjects (77male & 66 female) GHQ negative (score less than 3) subjects from the community formed the normal group for the study and 157 indoor & outdoor psychiatric patients (suffering with three type of disorder like schizophrenics, bipolar and conversion) (102 male & 55 female) admitted in Nirwan neuropsychiatric clinic Lucknow & Bareilly mental hospital, Bareilly U.P. India. Age ranging between 20-30, 40-50 & 60 and above served as participants. Sentence completion test (SCT) was administered on all the included subjects. **Result:** Light brown color of eyes male had high psychiatric morbidity (68.47%) then female. **Conclusion:** Colour of eye can be indicate the personality trait of human being black colour of eyes indicate negative traits of personality in female.

Keywords: SCT, Personality, Psychiatric patients, Eye colour.

We have all heard the clichéd expression that “eyes are the window to the soul,” We’ve all seen various personality tests that tell us a little about our fortune and personality like this one that says the door you choose reveals secrets about your soul, but our eyes are an actual physical part of us and can tell us even more. Scientists studied 428 subjects to see if their personalities were linked to the irises in their eye. They found that our eye color is affected by the same genes that form our frontal lobes, thus there are distinctly shared behaviors in people with similar irises. Dr. Anthony Fall one of Edinburgh University has studied the links between eyes and personality as well. “The eye is so closely linked neurologically to the brain that you might call it the only part of our brain you can see from the outside. It seems to hold vital clues to our brain function.”

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Eye Colour: A Physical Trait Correlates with Personality & Mental Health

A survey was conducted by Cyber Pulse, a division of Impulse Research Corporation in Los Angeles, and commissioned by CIBA Vision. The survey questioned 1,016 women ages 16 to 35. The results found that women often associate different eye colors with specific personality traits the study found that 34% of participants considered people with brown eyes intelligent, kind, and trustworthy. In contrast, people with blue eyes were considered kind, sweet, and sexy, but only 7% of participants described blue-eyes people as intelligent. Finally, 29% of research participants said they considered green eyes, the sexiest of all the different colors, and their owners to be creative, sexy and a bit devious.

Human eye has become more than a window into such medical problems as thyroid disease and hepatitis. It is inspiring a host of cutting-edge studies on brain abnormalities and behavioral conditions. Experts in cognition, epidemiology, ophthalmology, and neuroscience are collaborating to explore the potential of our eyes to identify our risk for mood disorders, learning disabilities, or cognitive impediments. The research largely remains preliminary, but it holds the promise of providing new ways to diagnose impending problems involving the brain. In the 1960s, Raymond Cattell reported differences in cognitive styles between people with blue and brown eyes. Since then, several other studies have drawn connections between eye color and physiological or behavioral traits. But few scientists have been able to replicate those findings, in part because the eye color effect appears to fade over the course of childhood. Researchers at Orebro University in Sweden looked beyond eye color to find personality variables, focusing on other features of the iris. Psychological scientist Mats Larsson and colleagues administered a standard personality test to 428 volunteers and also took photos of their eyes they found that a low number of squiggly lines, known as crypts, radiating out from the pupil were associated with tender-mindedness, warmth, trust, and positive emotions.

Therefore the study was planned to investigate the relationship between colour of eyes relates with personality and psychiatric illness.

METHOD

Participants

This study was conducted on 300 subjects of them 143 were normal subjects (77male & 66female) and 157psychiatric patients suffering with three types of mental disorder schizophrenia, mod disorder and conversion disorder (102male & 55 female). They were hailed from Nirwan neuropsychiatric clinic Lucknow U.P. & Bareilly mental hospital, Bareilly U.P.India. GHQ negative (score less than 3) subjects from the community formed the normal group for the study. Sentence Completion Test was administered on all the included subjects.

Tools:

General Health Questionnaire-12 (GHQ-12): The 12-Item General Health Questionnaire (Jacob et al. 1997) is the most extensively used screening instrument for common mental disorders, in addition to being a more general measure of psychiatric well-being.

Sentence Completion Test: This test is developed by **Dubey and Dubey(2006)** and it is comprised of 50 incomplete sentence and the participants are instructed to complete every incomplete sentence by the first appearing thought of their mind. The objective of this test to measure certain personality traits. An attempt has been made to measure three personality characteristics through the responses of the subjects. These traits are (1) Sociability, (2) Self Confidence, and (3) Ambitious. All the sentences are so framed that they lead to reveal the positive or negative aspect related to one of the traits.

Procedure:

This study was conducted on 300 subjects of either sex. Participants taken from psychiatric clinics and community both, psychiatric patients taken from the psychiatric clinic on the basis of OPD & indoor setup with schizophrenia, mood disorder and conversion disorder, giving written informed consent were taken as psychiatric patients. GHQ negative (score less than 3) subjects from the community formed the normal group for the study. Sentence Completion Test **Dubey and Dubey(2006)** was administered on all included subjects. The eye colour data in this study only taken for observation basis of all the participants. Uncooperative subjects, having problem in speech and communication which can impede the interview were excluded from the study. Data was analyzed using chi square test.

RESULTS

Keeping in view the main objectives of the present study chi-square was employed to see the difference between normal and psychiatric individual's personality traits regarding eye colour. 2x2 contingency table and 3x3 contingency table has been used for knowing the significant level, any cell was having an observed frequency less than 5, then Yates' correction was applied for the test significant.

The result of the present study has been given below and consecutively discussed.

Table-1 Socio-demographic characteristics of the participants there is two groups include in this study from the society. One group is normal and the other group is psychiatrically ill. Most of the participant in both groups was married. Occupation wise most of the participant (48.25%) employee and the psychiatric group (54.77%) were unemployed. Education level of the participant in normal group almost found up to 12th and the psychiatric group (62.42%) found up to be 9th standard. 59.44% normal participant belonging from urban area and 64.96% psychiatric patient belonging from rural area. Most of the participants in group one have middle economic

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status and the other counterpart has lower economic status. Majority of the participants belong from 40 to 50 year of age.

Table-1 Showing other socio-demographic detail of normal and psychiatric group

Variable	Category	Group I (Normal)		Group II (Psychiatric)	
		N=143	%	N=157	%
Marital Status	Married	82	57.34%	86	54.77%
	Unmarried	59	41.25%	68	43.31%
	Other	6	4.19%	3	1.91%
Occupation	Unemployed	60	41.95%	86	54.77%
	Employed	69	48.25%	40	25.47%
	Semi skillful	18	12.58%	31	19.74%
Education	Up to-9th	43	30.06%	98	62.42%
	Up to 12	59	41.25%	35	22.29%
	Graduation	45	31.46%	24	15.28%
Residence	Urban	85	59.44%	55	35.03%
	Rural	62	43.35%	102	64.96%
Income (monthly)	Below-6000	36	25.17%	78	49.68%
	6000 to 12000	63	44.05%	56	35.66%
	Above 12000	48	33.56%	23	14.64%
Age	20-30 year	33	23.07%	45	28.66%
	40-50 year	69	48.25%	53	33.75%
	60 and above	45	31.46%	59	37.57%

Table -2 Diagnostic distributions of the participants on the basis of eye colour

Colour of eyes	Gender	Normal Group N=143	Psychiatric group				X2
			Schizophrenia	Mood disorder	Conversion	Total Psychiatric N=157	
Light Brown N=119	Male N=73	23(31.50%)	25(34.24%)	15(20.54%)	10(13.69%)	50(68.49%)	5.05 df-1
	Female N=46	24(52.17%)	12(26.08%)	7(15.21%)	3(6.52%)	22(47.82%)	
Dark Brown N=120	Male N=71	44(61.97%)	8(11.26%)	15(21.12%)	4(5.63%)	27(38.02%)	0.36 df-1 non significant
	Female N=49	26(53.06%)	10(20.40%)	7(14.28%)	6(12.24%)	23(46.93%)	
Black N=61	Male N=35	10(28.57%)	9(25.71%)	12(34.28%)	4(11.42%)	25(71.42%)	6.62 df-1
	Female N=26	16(61.53%)	5(19.29%)	2(7.69%)	3(11.53%)	10(38.46%)	

Table-2 indicate that colour of eyes relate with normal and psychiatric population. Table indicate that male having light brown color of eyes had high psychiatric morbidity (68.47%) then

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female, the difference is statistically significant ($p < .01$) and the other combination male black colour of eyes had very high psychiatric morbidity (71.42%) in comparison to female group this difference is also statistically significant ($p < .01$). But in dark brown colour of eyes (61.97%) found in normal male population there was no significant difference was found.

Table-3 Personality traits of normal male psychiatric male on the basis of eye colour

Color of eyes	Total Normal & psychiatric male	Personality Traits			X2
		Sociability, Self confidence & ambitiousness			
		Very high	Average	Very low	
Light brown	Male N=73	43(58.90%)	10(13.69%)	19(26.02%)	10.08 df-4
Dark brown	Male N=71	44(61.97%)	9(12.67%)	18(25.35%)	
Black	Male N=35	13(37.14%)	12(34.28%)	10(28.57%)	

Table-4 Personality traits of normal female psychiatric female on the basis of eye colour

Color of eyes	Total Normal & Psychiatric female	Personality Traits			X2
		Sociability, Self confidence & ambitiousness			
		Very high	Average	Very low	
Light brown	female=46	16(34.78%)	10(21.73%)	20(43.47%)	10.86 df=4
Dark brown	female=49	22(44.89%)	8(16.32%)	19(38.77%)	
Black	female=26	2(7.69%)	7(26.92%)	17(65.38%)	

Table-3 indicate the colour of eyes relate with the personality traits. According to the table normal and psychiatric male have light brown colour of eyes high (58.90%) level sociability, self confidence and ambitiousness and the other combination dark brown eyes normal and psychiatric male very low (25.35%) on these three personality traits. Statistically significant difference ($p < .01$) was found in color of eyes between male group.

Table-4 indicate the colour of eyes relate with the personality traits. According to the table normal and psychiatric female have high (44.89%) level of sociability, self confidence and

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ambitiousness and the other combination dark brown eyes normal and psychiatric male very low (38.77%) on these three personality traits. Statistically significant difference ($p < .01$) was found in color of eyes between female personality traits.

DISCUSSION

The study was conducted to explore the difference of personality between normal and psychiatric population having different colour of eyes. The results show that male having light brown color of eyes have high psychiatric morbidity (68.47%) then female, the difference is statistically significant ($p < .01$) and the other combination male black colour of eyes have very high psychiatric morbidity (71.42%) in comparison to female group this difference is also statistically significant ($p < .01$). Other study regarding physical trait relation between baldness and mood disorder was found to be statistically significant ($p < 0.00$) (Tiwari & Singh, 2014). Light brown color of eyes in normal and psychiatric male population having high level of sociality, self confident and ambitiousness traits of personality and the other counterpart light brown colour of eyes normal and psychiatric female very low in all these personality traits. Some studies reported that people with brown eyes are often individualists who are steadfast, serious, practical, self sufficient, with a somewhat retiring nature, and a strong sense of commitment. Often attractive, adorable, and enjoys making new friends kind, loyal and devoted to the special people in their lives. 65.38% female having black colour of eyes very low social, self confident and ambitious In comparison to male Studies related to black colour of eye have a dynamic character full of vitality, people with black eyes tone to be hot-tempered, impulsive and often seek dangerous adventures. They command respect, exhibit great dignity, but they are often pretentious, secretive and mysterious.

CONCLUSION

Colour of eye can be indicate the personality trait of human being black colour of eyes indicate negative traits of personality in female and light brown eyes indicate negative traits of personality in male group.

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Conflict of Interest

The paper is based on the ongoing PhD work.

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Garments Worker's Job Stress and Mental Health

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ABSTRACT

The present study attempted an empirical investigation to explore the job stress and mental health of garment workers as a function of gender and salary. A total of 120 respondents constituted the sample of the study were selected purposively of Chittagong district Bangladesh. Among them 60 workers were male (20 were salary ranges of 4000-8000 ₳, 20 were salary ranges of 8100-12000 ₳ and 20 were salary ranges of above 12000 ₳) and 60 workers were female (20 were salary ranges of 4000-8000 ₳, 20 were salary ranges of 8100-12000 ₳ and 20 were salary ranges of above 12000 ₳). An adapted Bengali version (Rahman and Sorcar, 1990) of 'Job Stress' scale and Bengali version (Sorcar and Rahman, 1989) of "Mental Health" scale were used. Data were analyzed by mean, standard deviation, Pearson Product Moment Correlation and two-way analysis of variance (ANOVA). The findings of the present study showed that female workers had significantly more job stress ($F=72.07$, $df=1$, $p<.00$) than male workers and lowest salary ranges workers had significantly more job stress ($F=20.78$, $df=2$, $p<.00$) than highest salary ranges workers. No significant interaction effect found between gender and salary according to job stress. On the other hand, gender had no significant effect on mental health and highest salary ranges workers had significantly more mental health ($F=5.71$, $df=2$, $p<.00$) than lowest salary ranges workers. No significant interaction effect found between gender and salary according to mental health. Results also showed that job stress was negatively correlated ($r = -.35$, $p<.01$) with mental health.

Keywords: *Garment Workers, Job Stress, Mental Health.*

Nobody can deny that jobs and careers are paramount part and parcel of our lives. A person who works in garments is called garment workers. Someone whose occupation is making or repairing fur garments products is called garment workers. Someone says that the persons who makes or mends dresses in the factory or garment industry is called garment workers. In another sense,

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someone who does work as sewing or embroidery with a needle someone who sells men's clothes a garment maker who performs the finishing steps person whose occupation is making and altering garments someone who does work as sewing or embroidery with a needle. Along with providing a source of income, they help us fulfill our personal aims, build social networks and serve our professions or communities.

Job stress can be defined as the harmful physical and emotional responses that occur when the requirements of the job do not match the capabilities, resources, or needs of the worker. Job stress can lead to poor health and even injury. Job stress is stress involving work. According to the current

World Health Organization's (WHO) definition, occupational or work-related stress is the response people may have when presented with work demands and pressures that are not matched to their knowledge and abilities and which challenge their ability to cope. Warr and Payne (1983) showed that stress more often comes from how we respond to stressful events than from the events themselves. Some people feel less stressed because they see themselves as able to cope. People who view themselves as in control generally feel less stress.

Mental health includes our emotional, psychological, and social well-being. It affects how we think, feel, and act. It also helps determine how we handle stress, relate to others, and make choices. Mental health is zenith important at every phases of life, from childhood and adolescence through adulthood. Mental health is defined as a state of well-being in which every individual realizes his or her own potential, can accommodate with the normal stresses of life, can work productively and fruitfully, and is able to make a contribution to her or his community. Mental health can be described as the ability to respond to many varied experiences of life with flexibility and a sense of purpose. It is the state of balance between the individual and the surrounding world. According to World Health Organization (WHO) mental health includes; subjective well-being, perceived self-efficacy, autonomy, competence, intergenerational dependence, and self-actualization of one's intellectual and emotional potential, among others.

Wright et al., (1994) studied aspects of psychological work environment and health among male and female white-collar and blue-collar workers in a big Swedish industry. They reported that blue collar workers had more complaints about their physical and mental symptoms and less pleasure in work, when compared to white collar workers.

Occupational stress among factory workers has also been studied in developing countries. Rahman (1989) conducted an empirical study on male factory workers in Bangladesh. He found that workers in the high stress group were dissatisfied with their work and reported poorer mental health than the workers of the low stress group.

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Shankar and Famuyiwa (1991) examined Stress among factory workers in a developing country. And they concluded that job stress had significant impact on the mental health.

There has been quite a lot of research done within the work force in Taiwan. Taiwanese industrial workers placed great emphasis on social relationships at work (Cheng, 1980). Even the inability to maintain a harmonious relationship between co-workers has been rated as a major factor for work-related stress, burnout, and resignation (e.g., Huang, 1986; Kuo, 1989,1990). As far as demographics are concerned, male workers have higher job satisfaction and job commitment than female workers (Su and Huang, 1992). Married workers reported higher job satisfaction and job commitment than single workers (e. g., Chen and Huang, 1982; Huang, 1984; Su and Huang, 1992). Single workers even reported more job related stress than married workers (Hsu and Chen 1981). Older employees with longer working experience tend to report more job satisfaction and job commitment (e. g., Huang, 1986; Su and Huang, 1992; Chen and Huang, 1982).

Siu and Donald (1996) studied workers stress among workers from eight occupational groups in Hong Kong. They found that there was a statistically significant relationship between workers perceived stress, health complaints and job dissatisfaction. They also found that workers who were dissatisfied with the physical condition perceived a higher level of work stress, and exhibited more health complaints. But nearly all of these studies obtained data from white collar and professional groups.

Other studies have shown that the timing of work is also linked to adult mental health. Shift work, extended working hours and night work disrupt circadian patterns leading to anxiety, depression, mental distress and poor family relationships (Caruso, 2006; Virtanen et al., 2010). Nigam et al., (2007) conducted a study on safety and health in chemical industry. The study addressed the present global industrial scenario, for any industry to be successful, it is essential to inculcate safety culture, health consciousness and environmental awareness in every employee of the organization.

Paul- Majumder (2003) conducted a study on the physical and mental health status of garment workers and how problem affect labor productivity, competitiveness of the garment industry in the world market and the working life of the workers, particularly of female workers. It showed that various illnesses and diseases were widespread among the garment workers. A large number of workers were found to continue their work even they were suffering from various diseases and illness. Though the garment workers were very young they suffered from anemia, female diseases, dysentery, etc. Moreover, the competitiveness of the garment industry in the world market was seriously affected by the ill health of the workers, since ill health decreases the labor productivity to a great extent. Most of the health problems that the garment workers suffered from arose from the occupational hazards including long working hours, absence of leave

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facilities, congested and over-crowded working conditions, absence of health facilities and safety measures, absence of staff amenities, lack of safe drinking water etc.

Rationale of the study

Garment industry is the apex resource and leading sector of foreign currency in Bangladesh. This sector not only improves of our domestic growth but also enhances goodwill of foreign country. It helps us to reduce of our unemployment problems. Unfortunately, our government is indifferent of their development and wages. The garment workers are deprived of their various facilities such as good salary, promotion, provident fund, residence, allowance etc. Their life style is so miserable that they fail to supply their basic needs for their family members. Actually, it is great surprising that mainly our economy stands on their industry, but government and nongovernment institutions are not conscious of their minimum rights. Therefore, there are some selfish owners of garment industry who have a tendency to provide low wages and force to work hard. Their work environment is not supportive for their work. Some problems are existing in garment industry, such as lack of emergency service, lack of hygiene, lack of work space, noise etc which creates them job stress. Continuously suffering from job stress, it impacts on their physical and mental health. So, present research is conducted on garment workers to understand Bangladeshi garment workers have job stress during their work and also how they can get proper mental health which can make their life smoother during work. Most of the studies in this area have been done in western culture, but in Bangladesh there are very few studies. The findings of the study would have some applied values and the study would give new knowledge about job stress and mental health among garment workers. Therefore, this study will help us to provide such information which is very essential for mental health workers, psychologists, sociologists, governments, NGOs and policy makers to take effective steps to facilitate 'garment workers' development.

Objectives of the study

From the rationale, the main objective of the present study is to find out relation between job stress and mental health among garment workers as a function of gender and salary. Other objective is i) to investigate whether job stress of garment workers varies as a function of gender and salary and ii) to see whether mental health of garment workers varies as a function of gender and salary.

MATERIALS AND METHODS

Participants

The sample of the present study constituted of 120 garment workers. Among the 120 garment workers 60 were male workers. 60 male workers were taken in which (20 were of salary ranges of 4000 ₳ to 8000 ₳ per month, 20 were of salary ranges of 8100 ₳ to 12000 ₳ per month and 20 were of salary ranges of above tk. 12000 ₳ per month). Among the 120 garment workers 60 were female workers. 60 female workers were taken in which (20 were of salary ranges of 4000 ₳ to

8000 ₳ per month, 20 were of salary ranges of 8100 ₳ to 12000 ₳ per month and 20 were of salary ranges of above tk. 12000 ₳ per month). The sample of both groups was purposively selected from various areas in Chittagong district. These workers belong to different areas (Sholoshahar, 2no.gate, Baijid Bostami, Lalkhanbazar, Motijhorna, Agrabad, EPZ). Maximum workers socio-economic status was lower class and they were not so much educated.

Measuring Instruments

In the present research the following two questionnaire were used such as

Job Stress Scale: Job stress was measured by using the job stress index developed by – Srivastava and Singh (1981) which consisted of 46 items covering 12 dimensions of job stress. These are: role overload, role ambiguity, role conflict, unreasonable group and political pressures, responsibility for persons, under participation, powerlessness, poor peer-relations, intrinsic impoverishment, low status, strenuous working conditions, and unprofitability. Out of 46 items, 28 are true-keyed items and the remaining 18 items are false-keyed items. The reliability of the scale was tested by split-half method. It was 0.94 and, found to be highly significant. For the present study, a Bengali version adapted by Rahman and Sorcar (1990) of the index was used which was found to have high inter judge agreement. The responses were given weights of 1,2,3,4 & 5 respectively for strongly disagreeing to strongly agree.

Mental Health Scale: Mental health of the respondents measured by the translated and adapted version (Sorcar and Rahman, 1989) of the original GHQ (General Health Questionnaire) was developed by Goldberg (1972). It is a self administered screening test designed for detecting people with diagnosable psychiatric disorders. The GHQ – 12 is concerned with two phenomena: the inability to carry out one's normal health functions and the new phenomena of a distressing nature. Each item of the scale consists of question asking whether the respondent has recently experienced a particular symptom of behavior rated on 4-pointscale. Responses were given weights of 0, 1, 2 & 3 respectively. Among the 12 items, 6 were positive and 6 were negative. Positive items were scored in 4-points from 3-0 and negative items in the reverse order from 0-3, total score of the scale range from 0-36 with higher score indicating better mental health. The reliability of the Bengali version of the GHQ-12 was measured by parallel form method and was found to be quite satisfactory ($r = 0.69$).

Design

A cross-sectional survey research design was followed for conducting present study.

Procedure

At first we were going to the residence of garment workers of Chittagong district in Bangladesh. Then they were requested to co-operate with us for conducting the research. After convincing them to conduct the research, the purposively selected workers were then supplied with a set of questionnaires. The respondents were requested to read each statement & expressed their feelings by putting on tick mark (✓) on the appropriate point. Respondents fulfilled their

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questionnaires but there was no time limit condition. Respondents were assured that it was purely an academic research and that their personal information would be kept secret. After the questionnaires were filled in by the respondents, they were thanked for their co-operation.

RESULTS AND DISCUSSION

The data were analyzed by using mean, standard deviation, Pearson Product Moment Correlation and two-way analysis of variance (ANOVA). All statistical analyses were carried out using the statistical program SPSS version 16.0 for window.

Table 1 indicates that mean job stress score of male workers was 137.40 ($SD=8.97$) and female workers was 150.23 ($SD=10.35$) and mean job stress score of workers salary ranges of 4000-8000 ₹ was 146.35($SD=11.27$), salary ranges of 8100-12000 ₹ was 148.10 ($SD= 11.28$) and salary ranges of above 12000 ₹ was 137.00 ($SD= 9.12$).

Table 1: Descriptive statistics of job stress score according to gender and salary.

Salary				
Gender	4000-8000 ₹	8100-12000 ₹	above 12000 ₹	Total
Male	$M = 137.50$ $SD = 6.86$	$M = 143.60$ $SD = 7.00$	$M = 131.10$ $SD = 8.44$	$M = 137.40$ $SD = 8.97$
Female	$M = 155.20$ $SD = 6.96$	$M = 152.60$ $SD = 13.00$	$M = 142.90$ $SD = 5.11$	$M = 150.23$ $SD = 10.35$
Total	$M = 146.35$ $SD = 11.27$	$M = 148.10$ $SD = 11.28$	$M = 137.00$ $SD = 9.12$	

To determine whether the differences observed between the means in Table 1 were statistically significant, two-way analysis of variance (ANOVA) was computed. Table 2 shows that gender had significant effect on workers stress ($F = 72.07$, $df = 1$, $p < .00$) and salary had significant effect on workers job stress ($F = 20.78$, $df = 2$, $p < .00$). Female workers had more job stress than male workers and lower salary ranges workers had more stress than higher salary ranges workers. The result also shows no significant interaction effect between gender and salary.

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Table 2: Summary of the analysis of variance of job stress according to gender and salary.

Source of Variance	df	SS	MS	F	Sig. (p-value)
Gender	1	4940.83	4940.83	72.07	.00
Salary	2	2849.27	1424.63	20.78	.00
Gender* Salary	2	394.47	197.23	2.88	.06
Error	114	7815.40	68.56		
Total	120	2497988.00			

Table 3 shows that mean mental health score of male workers was 10.70 ($SD=3.09$) and female workers was 9.80 ($SD=3.59$) and mean mental health score of workers salary ranges of 4000-8000 ₹ was 8.90 ($SD=2.81$), salary ranges of 8100-12000 ₹ was 10.60 ($SD=3.80$) and salary ranges of above 12000 ₹ was 11.25 ($SD=3.05$).

Table 3: Descriptive statistics of mental health score according to gender and salary.

Salary				
Gender	4000-8000 ₹	8100-12000 ₹	above 12000 ₹	Total
Male	$M = 9.20$ $SD = 2.59$	$M = 10.50$ $SD = 3.53$	$M = 12.40$ $SD = 2.26$	$M = 10.70$ $SD = 3.09$
Female	$M = 8.60$ $SD = 3.05$	$M = 10.70$ $SD = 4.14$	$M = 10.10$ $SD = 3.34$	$M = 9.80$ $SD = 3.59$
Total	$M = 8.90$ $SD = 2.81$	$M = 10.60$ $SD = 3.80$	$M = 11.25$ $SD = 3.05$	

To investigate whether the differences observed between the means in Table 3 were statistically significant, two-way analysis of variance (ANOVA) was computed. Table 4 shows that gender has no significant effect on workers mental health ($F = 2.36$, $df = 2$, $p < .13$) and salary has significant effect on mental health ($F = 5.71$, $df = 2$, $p < .00$). Male workers had higher mental health than female workers. And higher salary level workers had high mental health than lower salary level workers. The result also shows no significant interaction effect between gender and salary.

Table 4: Summary of the analysis of variance of mental health according to gender and salary.

Source of Variable	df	SS	MS	F	Sig. (p-value)
Gender	1	24.30	24.30	2.36	.13
Salary	2	117.80	58.90	5.71	.00
Gender * Salary	2	32.60	16.30	1.58	.21
Error	114	1175.80	10.31		
Total	120	13958.00			

Finally, to find out whether there is any relation between job stress and mental health of gender (male and female) and different salary ranges (4000-8000 ₳, 8100-12000 ₳ & above 12000 ₳) workers. Pearson Product Moment Correlation was conducted. Negative correlation ($r = -.35$) was found between job stress and mental health in workers with an alpha level of $p < .01$. That means the increase of job stress, mental health decrease.

The present study has focused on to find out relation between job stress and mental health among garment workers as a function of gender and salary. The first objective of the present study was to investigate whether job stress of garment workers varies as a function of gender and salary. The result indicates that job stress score of female was higher than male workers. The result also indicates that job stress score of salary ranges 4000-8000 ₳ and 8100-12000 ₳ was higher than salary ranges above 12000 ₳ of workers. The mean score indicate that workers job stress score of female ($M=150.23$, $SD=10.35$) was higher than the score of male ($M=137.40$, $SD=8.97$). Garment workers are doing so many works in factories. They have so much pressure during their work. Their salary also very low compared to their work. They work so hard from early morning to night. But they can't get enough money for their work. So, they feel little enthusiasm for doing job. They feel frustrated in carrying out responsibilities at work. Their quality of work is less day by day. And they feel negative or depressed about their job. Both male and female workers can't give much time to their families. Especially women workers who have to manage their household chores beside their job can't give enough time to their families and friends. They can't give proper attention to their children. They feel physically, emotionally or spiritually depleted. They face some difficulties about decision making and having difficulties in concentrate their maximum work. They feel dissatisfaction whatever they do their everyday life. These issues facilitate stress among workers. Rahman (1989) conducted an empirical study on male factory workers in Bangladesh. He found that workers in the high stress group were dissatisfied with their work. Because of job stress they can't do any work properly. They feel frustrated in carrying out responsibilities at work. Male workers have higher job satisfaction and job commitment than female workers (Su & Huang 1992). Male are stronger than women. They can do more work than women. Women have less potentiality to manage both job and family. So female workers have more stress than men workers.

Garments Worker's Job Stress and Mental Health

On the other hand, mean score indicate that workers job stress score of salary ranges 4000-8000 ₳ ($M=146.35$, $SD=11.27$) & salary ranges 8100-12000 ₳ ($M=148.10$, $SD=11.28$) was higher than score of above 12000 ₳ ($M=137.00$, $SD=9.12$). The workers whom salary was less and medium had more job stress than highest salary paid workers. Because lowest salary paid workers work so hard & their work was so risky. They work from early morning to night. But they can't get sufficient money what they actually deserve. With this little amount they can't fulfill their family's daily needs. The workers who have much money can give their family a better lifestyle than the workers who have lowest salary. So, that lowest salary paid workers have more job stress than highest salary paid workers. Rogers (2010) in his writing mentioned that Bangladeshi garment workers are the lowest paid garment workers in the world. Although their minimum wage was supposed to have risen to about \$40 a month in November 2010, many garment factory owners are still paying the old minimum wage of \$24 a month. Their lowest salary leads to job stress. In our study we found that the workers whose salary ranges medium had more job stress than lowest salary paid workers and highest salary paid workers. Because the work they had was more difficult than lowest and highest salary ranges workers. But their salary was not enough for their work. So under the pressure of so many works they had job stress.

The second objective of the present study was that to see whether mental health of garment workers varies as a function of gender and salary. The result indicates that there was no significant difference in mental health score of male and female. The results also indicate that mental health score of salary ranges above 12000 ₳ was higher than salary ranges 4000-8000 ₳ and 8100-12000 ₳. The mean scores indicate that workers mental health score of male ($M=10.70$, $SD=3.09$) and female ($M=9.80$, $SD=3.59$) was almost same. Male and female both worked outside of home. Their responsibilities were also same. They had equal value in their family and society. So there was no difference in male and female mental health score.

On the other hand mean score indicate that workers mental health of salary ranges above 12000 ₳ ($M=11.25$, $SD=3.05$) was higher than score of salary ranges 4000-8000 ₳ ($M=8.90$, $SD=2.81$) and 8100-12000 ₳ ($M=10.60$, $SD=3.80$). These findings showed that the workers who have highest salary have higher mental health than the workers who have lowest salary. Highest salary paid workers had good mental health than lowest salary paid workers. Different level of salary can affect mental health. The workers who earn more money can fulfill their needs & they can give their family and children a better life. But lowest salary paid worker have less money & they face so many problem in their life. Their living style, socio-economic status, educational qualification is different from highest salary paid workers. They cannot give their children proper education. Most of the women workers whom husbands were not with them have more trouble in their life. They face so many difficulties in their life because of less money. They don't have self control. They emotionally and psychologically deprived. They are unable to balance rationality and emotionality. So their mental health is low.

Garments Worker's Job Stress and Mental Health

The final objective of the study was to observe whether there is any relation between job stress and mental health among garment workers as a function of gender and salary. Negative correlation ($r = -.35$) was found between job stress and mental health of workers with an alpha level of $p < .01$. It reveals moderately significant relationship between the job stress and mental health of gender and salary among garment workers. The workers who have higher job stress, their mental health is poorer. And the workers of poorer job stress have higher mental health. That means workers of poor job stress and high mental health can adjust with different circumstances in their life, they can make decisions, they can take care of their families and children without any stress, they can lead their life properly. But the workers of high job stress and poor mental health can't lead their life properly, can't express their feelings to others.

The main limitation of the present study was; purposive sampling has narrowed the scope of the present study in terms of generalizing the findings and therefore, the number of the participants was only 120 which were not enough for the generalization for the findings. Further studies should carry out analysis on duration, age, education, family type, specific behavior, social or physical health problems of garment workers.

From the above limitation this study may have important recommendations; workers works in garment factories represent our country to the worldwide. Therefore, garment authorities should give them chance to develop new skills, reward them if workers done their job finely. Workers should take a short break at work if they feel anxious or stressed. They should eat healthy meals, express their feelings to their close ones, spend time with friends and family, should get enough sleep. The findings of present study are helpful for authorities of garment factories to identify what problems are faced by these workers so that they can help them to cope up with their problems through proper counseling and guidance services arrangements.

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Conflict of Interests

The author declared no conflict of interests.

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Investigation the Relative Expression of Genes of ATPase Family in Major and Regular Depressed Patients

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ABSTRACT

To develop new pharmaceutical strategies in a comprehensive manner, it is necessary to understand the reasons for major depression. Present paper aims for comparison of expression of ATPase families in major depressed and normal people. Statistical population of this research includes all depressed people coming to professional clinic of Shahryar in 2014-15. This contains 47 depressed patients which were selected based on accessibility from those visiting clinic. 26 normal people were selected as comparison group as well. To study the relative expression of ATPase1-3, quantitative measurement method using Real-Time RT-PCR was used. Relative expression of ATPase2 showed a significant reduction compared to normal people ($p < 0.02$). In patients, ATPase1 had higher relative expression compared to normal people. However, ATPase had no significant difference among patients and normal people. Results demonstrate that ATPase1 and ATPase2 are important variables in depression but ATPase3 plays no pivotal role in this regard.

Keywords: *Major Depression, Gene Expression, ATPase*

Major Depression Disease (MDD) is a frequent psychological disease which is predicted to be the second major factor of disability all around the world up to 2020 (Marie et.al, 1996, Ester et.al, 2010). WHO reported that currently, more than 450 millions of people the majority of which are living in developing countries suffer from psychological diseases or disabilities (Zamanlou et.al, 2013). This is accompanied with increase in deaths specially suicide (Harris et.al, 1998, Schneider et.al, 2001).

Depression is the most common neurotic dysfunction (Shamlou, 1998). In limited medical context, this means a behavioral disease or reaction dysfunction and in clinical context, it is a

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sign of depressed behavior (Dadsetan, 2003). Main characteristic of depression disorders is that someone feels sad. Depression disorders is not accompanied with Mania. Major depression disease is the sense of serious missing, losing joy of life, disorders in eating and sleeping (Hulchin, 2010). According to DSM-IV-TR regulations, depression is considered as major when it persists more than two weeks and it not resulted from factors such as drug abuse or general medical conditions (Dadsetan, 2003). Depression is composed of four sings: 1. Emotional signs, 2. Cognitive signs, 3. Motivational signs and 4. Physical changes (Rouznahan, 2007).

To develop new pharmaceutical strategies in a comprehensive manner, it is necessary to understand the reasons for major depression. A part of traits diversity in MDD is genetic. Twins studies estimate heritage of MDD about 40% (Salivan, 2000) or even more (Kindler et.al, 2001). Therefore, genetic field is a hope for research in MDD. In long-term, genetic knowledge corresponding to MDD may help treatment strategies. Concept of personal medication (Langhert et.al, 1999) which is basically formulated for tomography recommends that people must be treated with drugs compatible with their own genotype. This may have relationship with weak reaction of patients to the same drug in psychology (Lean et.al, 2008). It is even demonstrated that classification of patients according to their genetic traits can be used for minimizing the reaction to antidepressant treatments (Joyce et.al, 1994, Lopez Leon et.al, 2008).

The objective of this research is to compare the level of ATPase genes expression in depressed and normal people. Depression is one of four main diseases of the world and the most common reason of disability resulted from diseases (Buchanan, 2012). Recent studies revealed that major depression has the highest frequency among psychological diseases (about 17%) (Saduk, 2010). One out of five people will experience major depression in a point in life (Kessler et.al, 2003). In recent years, in young population even in adolescents this disorder has increased considerably (Jean et.al, 2012). Episodic Major Depression is recognized with low temper and disability in enjoy or both for two weeks (Morgen et.al, 2009). In this case, person has a seriously depressed temper, psychological and movement laziness, anxiety, sadness feeling, embarrassment, sense of sin and suicide motivations (Saduk, 2007). Of the most devastating consequences of this disorder is reduction of tendency for work and activity (Hosseini et.al, 2012). Evidences show that various factors contribute to depression disease and a unique and clear factor cannot be considered as the sole factor of this problem.

Various variables such as age, social and personal factors, biological variables such as genetic diseases, hormonal disorders and drugs are among factors contributing to this disease. In studying the genetic structures contributing to depression disorder, majority of researches emphasize on the role of various genes in increasing the probability of depression (Zamanlou et.al, 2013). Biological pattern states that depression is a motivational disorder resulted from the lack of biogenic amines. Biogenic amines are neurochemical substrates which facilitate the

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neural transfer. It is possible that depression resulted from reduction of Catecholamine including nor epinephrine, epinephrine, dopamine or one of Indole Amines such as serotonin and histamine (Rouznahan, 2007).

Therefore, present paper intends to answer the main question that whether there is any difference between ATPase gene expression of patient and normal people.

ATPase family genes

Na/K/ATPase protein is a membranous transport protein having the primary physiological role in survival of cellular transport of Na and K moving ions (Heurisberger, 2009) which is essential for control of stagnant membrane potential, cellular volume, cellular pH, K concentration and transport of other necessary solutions. Na/K/ATPase protein is a function of two subsections called α and β having several isoforms and distribution of patterns in various textures (Blanco and Mercer, 1998). Main function of α subsection is for hydrolyzing paired ATP by transporting K/Na. three forms of α isoforms are available as α_1 , α_2 and α_3 each of which are codes for ATP1A1, ATP1A2 and ATP1A3, respectively. Central system expresses the isoforms of each part. (Heurisberger et.al, 2009). Previous studies illustrated that preventing activity of Na/K/ATPase reduces the recognition of norepinephrine, serotonin and dopamine (Stephens and Feveras, 2004) and therefore, this changes the neural cell communication (Valindo et.al, 2002). It is assumed that depression affects central neural network and then sympathetic and parasympathetic system and neuroendocrine system (axis of hypothalamus – adrenal pituitary) leading to abnormalities in transportation of serotonin – marking calcium and neurotropic agents (Lega et.al, 2008).

Studies have shown that there is a considerable reduction in ATP1A1 gene expression in majority of depression disorders compared to normal people which may reflect the change in level of this gene expression in central neural network (Lega et.al, 2008). Significant reduction in gene expression may have various effects on functionalities of the central neural network. Reduction in activity of Na/K/ATPase directly affects the signaling of neural transmitter of neural activity and all body movements through reduction of norepinephrine, dopamine, serotonin and increase of free acetyl choline (Watta and Stephens, 2004, Blassy et.al, 1988). By comparing isoforms of Na/K/ATPase subsections, it was discovered that brain addresses amino acid sequences and potential structures of protein. Investigation of criteria and tools reveals the contribution of isoforms of Na/K/ATPase subsections in various types of depression. Recent results led to development of the method of molecular recognition for major depression disease based on application of ATP1A1 as a molecular marker.

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MATERIALS AND METHODS

After determination of people of major depression group, they were approved through depression test carried out by a depression psychologist and for sampling, written consent was taken from them.

After approval of psychologist and getting consent, 3cc blood was taken from them and added to 15cc falcon containing 0.5cc EDTA anticoagulant (0.05M). Then, it was inverted so that it can be well mixed.

For RNA extraction, this must be performed 3 hours after blood taking. In this experiment, Roche kit made in Germany was used.

First step in this research was to separate WBCs. For this, according to kit instructions, 500 μ l blood containing EDTA (0.05M) was transferred to vial 1.5 and free RNase and DNase. Two times of blood volume, RCLB was added.

This vial was inverted for 10 minutes and then centrifuged by 2500rpm for 5 minutes. After centrifuge, above solution was discarded and only deposits were kept. Again, 1000 μ l RLCB was added to vial and inverted for 5 minutes. After mixing, it was centrifuged for 3 minutes by 2500rpm. Then, above solution together with RBCs surrounding white deposition was removed from the vial and 200 μ l PBS 1x was added. After removal of RBCs, kit can be used for extracting RNA.

Next step of experiment is to extract RNA from RBCs. First, 400 μ l cell lysis binding was added to vial contacting 200 μ l PBS 1x and it was suspended slowly and vortexed for 15s to obtain a clear and homogeneous solution. Then, this solution was added to vials having filters and centrifuged for 15s in 10000rpm. After centrifuge, below solution was removed. In this stage, RNA and DNA stick to the filter. Then, 90 μ l incubation buffer and 10 μ l DNase I were added to vial.

After adding DNase, vials were put under hood for 15 minutes to affect DNAs. Then, 500 μ l solution of Wash Buffer I was added to filters and centrifuged for 15s in 10000 rpm. This was done for washing out salts, proteins and so on. Then, below solution was removed. Next stage was adding 500 μ l Wash Buffer II and centrifuging for 15s in 10000 rpm. Then, below solution was removed. For the next time, Wash Buffer II as much as 200 μ l was added to vial and then, it was added to vial and centrifuged for 2 minutes in 13000 rpm. Then filtered vial, was sterile and free RNase and DNase were transferred. After transferring, 50-100 μ l elution buffer was added to vial filter and centrifuged for 1 minute in 10000 rpm. In this stage, below solution entering vial contains RNA. Finally, vial was stored in -70°C.

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Evaluation of purity and quality of extracted RNA

After extracting mRNA, its quality and quantity was assessed using spectrophotometry and electrophoresis of Agarose gel.

Data analysis method

To investigate hypotheses, in descriptive statistics, central indices and dispersion corresponding to questionnaire scores were determined. In this section, t-test method was used for investigation of hypotheses and $2^{-\Delta\Delta CT}$ formula was used for determination of changes in genes expression. Level of significance for testing hypotheses was set less than 0.05. To analyze data, SPSS 16 was used.

RESULTS AND DISCUSSION

According to table 1, it was revealed that average age of normal people in this work is 39.12 with 1.89 standard deviation. Patients were slightly younger and their average age was 37.71 with standard deviation as much as 4.99. Average of ATPase1 of relative expression in normal people was 0.44 with 0.841 standard deviation. On the other hand, average of ATPase1 of relative expression in patient people was 2.06 with 1.21 standard deviation. Average of ATPase2 in normal people was 1.79 with 2.65 standard deviation; while the average of ATPase2 in patient people was 2.27 with 1.42 standard deviation. Finally, Average of ATPase3 in normal people was 2.62 with 1.24 standard deviation, while average of ATPase3 of relative expression in patient people was 2.098 with 1.024 standard deviation which shows no significant change between groups.

Table 1: average and standard deviation of age for normal and patient people

Variable		Depression	Age	ATPas3	ATPase1	ATPase2
Normal	Average	14.46	39.12	2.62	1.44	1.79
	Abundance	26	26	26	26	26
	Standard Deviation	3.45	1.89	1.24	0.842	2.65
Patient	Average	46.29	31.71	2.09	2.06	1.27
	Abundance	47	47	47	47	47
	Standard Deviation	5.75	4.99	1.02	1.21	1.42
Sum	Average	38.52	38.21	2.28	1.84	1.46
	Abundance	73	73	73	73	73
	Standard Deviation	11.66	4.20	1.12	1.12	1.95

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Analytical findings

Table 2: average and results of t-test for relative scores of studied genes for normal and patient people

	Abundance	Amplitude	Minimum	Maximum	Average		Standard deviation	Variance
					Standard deviation			
Depression	73	35	20	55	38.52	1.36	11.66	136.14
Age	73	23	22	45	38.21	0.49	4.20	17.65
ATPas3	73	3.54	0.87	4.32	2.28	0.13	1.12	1.27
ATPase1	73	3.71	1	4.71	1.84	0.13	1.12	1.27
ATPase2	73	8.87	0.06	8.93	1.46	0.22	1.95	3.81
Abundance	73							

In table 2, average scores of patients according to questionnaire is 46.29 ± 5.75 for depression, 1.06 ± 1.12 for ATPase1, 0.27 ± 1.42 for ATPase2 and 2.09 ± 1.02 for ATPase3. Moreover, it was 24.46 ± 3.45 for depression, 2.44 ± 0.84 for ATPase1, 1.79 ± 2.65 for ATPase2 and 2.09 ± 1.02 for ATPase3 in normal people.

Table 3: average and standard deviation for normal and patient people

P value	DF	t	Standard Deviation	Average	Group	Variable
0.000	71	-17.645	5.75	46.29	Patient	Depression
0.000			3.45	14.46	Normal	
0.024	71	-2.311	0.08	2.44	Patient	ATPase1
0.013			0.84	1.06	Normal	
0.028	71	1.073	1.42	0.27	Patient	ATPase2
0.036			2.65	1.79	Normal	
0.077	71	1.933	1.02	2.09	Patient	ATPase3
0.074			1.24	2.62	Normal	

Depression average in patients was significantly higher than normal people ($P < 0.000$). Level of gene expression for ATPase2 in patients showed a significant reduction compared to normal people ($P < 0.287$). ATPase1 had a significantly higher gene expression in patients ($P < 0.024$). However, ATPase3, showed no significant difference among patients and normal people. it seems that expression of this gene has no contribution to depression.

Relative expression of ATPase was measured using Real-Time PCR with respect to GADPH gene expression and using Pfeufa formula with efficiency as much as 1.97. CT results are illustrated in Fig. 1.

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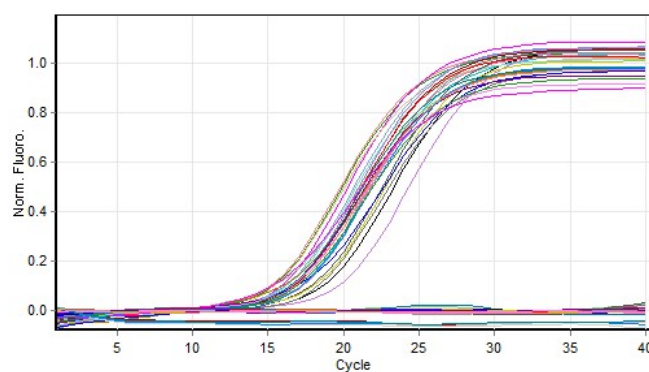


Fig. 1: logarithmic phase of ATPase3 gene expression using RT-PCR

In Fig. 2, approaching premature logarithmic phase represents the higher relative expression since Sybr Green attaches to two strands of DNA and as initial expression of mRNA increases, cDNA level will increase as well and attaches Sybr Green faster and will be visible. Therefore, MT in 83°C will be seen sharply and this illustrates the efficiency of PCR in recognizing expression values.

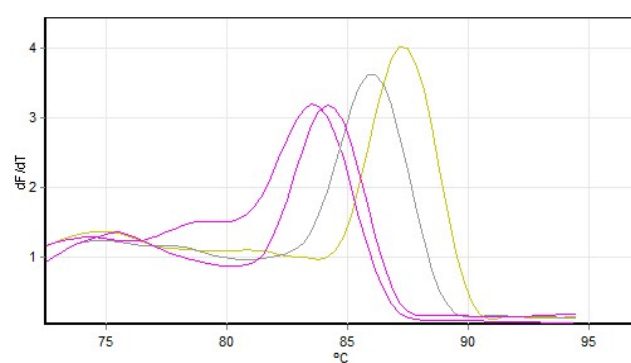


Fig. 2: TM illustration for three studied genes

Comparison of relative expression of ATPase2 is shown in Fig. 2. Results demonstrated that relative expression in MDD patients decreased significantly ($P < 0.02$) which reveals the reduction of ATPase receptor expression as a result of disease.

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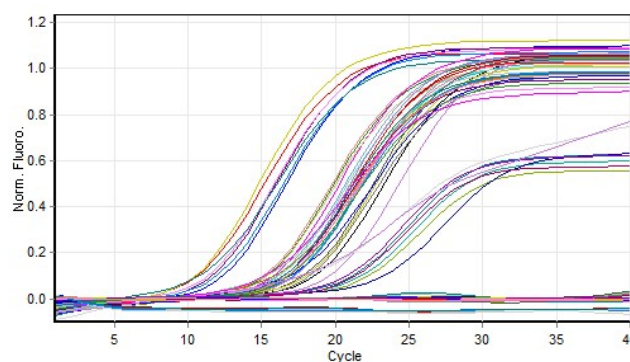


Fig. 4: CT (Logarithmic Fase) For relative Expression of ATPase1-2 genes

Relative expression of ATPase with respect to control group was investigated and it was revealed that ATPase1 reduced from 1 to 0.3 and this reduction is significant. However, ATPase3, showed no significant reduction and ATPase2 reduced from 1 to -1.3 which is a significant reduction and demonstrates that ATPase2 has a pivotal role in depression.

Relative comparison of ATPase1 is shown in Fig. 4. Results revealed that relative level of expression in MDD patients has increased significantly. Relative expression of ATPase1 was measured using Real-Time PCR with respect to GAPDH gene expression and using Pfeufa formula with efficiency as much as 1.97.

In Fig. 4, approaching premature logarithmic phase represents the higher relative expression since Sybr Green attaches to two strands of DNA and as initial expression of mRNA increases, cDNA level will increase as well and attaches Sybr Green faster and will be visible. Therefore, MT in 53°C will be seen sharply and this illustrates the efficiency of PCR in recognizing expression values.

Comparison of relative expression of ATPase3 is shown in Fig. 1. Results revealed that relative expression of this gene shows no significant difference between patients and normal people ($P < 0.07$) which represent the indifference of receptor of ATPase3 as a result of disease. Results reveal the reduction of expression of ATPase2 in patients compared to normal people. In addition, in ATPase1, relative expression increased but there was no significant difference between two groups which seems that this gene has no contribution to depression.

CONCLUSION

According to results, it was confirmed that relative expression of ATP1 and ATP2 decreased significantly in MDD patients. According to research hypothesis, it can be claimed that there is a significant difference in gene expression of ATP1 and ATP2 between patients and normal people. Results of this work are consistent with findings of Lili et.al who studied 22-26 years old Chinese people (19 men and 11 women) except that in their studies, relative expression of

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ATPase2 was 0.8 while in this work it is as much as 0.23. This demonstrates the contribution of ATPase2 in depression. According to Fig. 3, relative expression of ATPase1 decreased significantly which means that this gene plays role in depression as well.

Major depression affects central neural network and then autonomous nervous system, immunological system and endocrinology glands. Na/K/ATPase as a great intermediate for ion movements in cellular membrane transportation, plays an important role in transferring neural signal. Three types of Na/K/ATPase are discovered in brain but they vary among cells and expression level. It is confirmed that reduced gene expression for ATP1A2 and ATP1A3 are related to depressant dysfunction. However, there is no reported relationship between ATP1A1 and depression. This paper studied the potential relationship between expression level of ATP1A1 and major depression. Expression level for this gene was limited by surrounding flow in both depressed and normal people and controls of normal person was limited by translated quality polymerase chain reactions. Statistical analysis shows a significant decrease in expression of ATP1A1 in most of the depressed patients which is compared with health control ($P < 0.01$). Difference of nucleotide genes order and that of protein structures were expressed as well. These investigations proved for the first time that expression of ATP1A1 gene is strongly correlated with depression. It is suggested that ATP1A1 could be a molecular sign for recognition of the disease (Lili et.al, 2012).

The main role of ATPase is forming Na^+/K ion channel for transferring ATP through mitochondria of cytosol environment and ultimately supplying energy of metabolite processes (Rajakusked et.al, 2007). According to results, it seems that the level of energy produced in depressed people is lower since ATPase1 and ATPase2 have lower relative expression. Therefore, it can be said that even in production of ATP in mitochondria, its transfer to cytosol channels are less produced. Hence, ATP required by cell will decrease.

This finding is in agreement with Zamanlou et.al (2013) about relative expression of COX. In addition, lower energy level is reported in MS patients as well (Safavi et.al, 2013). Presence of a significant relationship between depression and relative expression of ATPase1 and ATPase2 justified the same outcome.

In present work, in relative expression of ATPase1 in depressed people, 230% reduction compared to normal people was observed. This is in agreement with Lili et.al (2013). By investigating the major depression, they demonstrated that there is more than 80% reduction in expression of ATP1A1 in depressed patients compared to control group; while reference controlling gene, β -actin showed no significant changes in each group. Unique results of variance of two groups of t-test, revealed the statistical differences. Another study was performed in bioinformatics which shows the comparison of structure of genes, comparison of

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nucleotide sequence of each of isoforms from recognition of sequence of ATP1A1 and ATP1A3 genes. However, no significant similarity was observed between ATP1A1 and ATP1A2. Nevertheless, comparison of amino acids sequences, revealed 87% of recognitions between ATP1A1 and ATP1A2 or ATP1A1 and ATP1A3. All three isoforms of transporting membrane and coiled-coiled regions showed the same functionality (Oh et.al, 2012).

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Conflict of Interests

The author declared no conflict of interests.

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Cognitive and Psycho-Social Effects of Childhood Obesity

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ABSTRACT

Childhood obesity has been declared as a global epidemic. Several studies have reported inverse associations of childhood obesity with cognitive and psycho-social functioning of obese children. The present study is an attempt to understand the cognitive and psycho-social aspects of childhood obesity in Indian context. The objective of the study was to compare the cognitive functions (memory, attention, and visual retention) and psychosocial functioning (body shape concerns and insecurity) of obese children with normal weight controls. The cross sectional research was carried out. Purposive sampling was used to collect the sample of 30 obese children and 30 normal weight children (controls) from schools in Delhi. The inclusion criteria for cases and controls were obese and normal weight children as per ICMR criteria, within the age range of 10-14 years. Children with previous history of head injury or other physical, medical or neurological problems, chronic medical illness and other metabolic disorders (diabetes and thyroid), were excluded from the study. All the children were assessed on cognitive functions (Digit symbol test and immediate memory test) and psycho-social functioning (Body Shape Questionnaire, Mohsen's security insecurity questionnaire). The performance of obese children was found to be poor compared to normal weight children by using t-test. Obese children performed significantly poor on attention and visual retention and immediate memory for direct reciprocation. However, there was no significant difference on reverse immediate memory test. Obese children were also found to be more insecure compared to the normal weight controls about their body image. Obese children expressed high body shape concerns compared to normal weight counterparts. Findings suggest independent associations of specific cognitive and psycho-social aspects with childhood obesity that can be targeted for prevention and management of this global epidemic.

Keywords: *Cognition, Psycho-Social, Childhood Obesity, Memory, Visual Retention, Security-Insecurity, Body Shape Concern.*

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Obesity is defined as a condition of abnormal or excessive fat accumulation in adipose tissue that may impair health (Garrow, 1988). The prevalence of childhood Obesity has been rising continuously over the past two decades and it has become a major health problem both in developed and developing countries including India (Ebbeling, Pawlak, and Ludwig, 2002). Traditional Indian culture upholds certain myths and misconceptions about childhood obesity such as a fat child is a healthy child, plumpness passes away with growth spurt over the years, fatness in an offspring is indicative of the prosperity of his or her family, and childhood is the age to eat and relax. But unlike the past, today obesity is recognized as a major health risk condition.

Obesity not only leads to physical health problem (type 2 diabetes, asthma, obstructive sleep apnoea, cardiovascular problems, musculoskeletal problems, stroke and some form of cancer, etc.) but to many other issues such as impairment in cognitive functioning (memory, attention, visuo-spatial ability, response inhibition, executive function, verbal fluency, intelligence etc.) and psychosocial problems (depression, anxiety, low self-esteem, confidence, insecurity, stress, body shape concern, negative body image, psychopathology, eating behaviour etc.).

Cognitive functions are cognitive processes/functions closely associated with function of one or more specific areas of the brain. It covers a range of cognitive functions or domains such as intelligence, perception, attention, memory and executive function. Standardized neuropsychological tests are used to assess different cognitive functions. Several studies have attempted to examine the neuro-cognitive aspects of childhood obesity and reported an association between childhood obesity and poor cognitive functions. The association of higher body mass index (BMI) and reduced performance on various cognitive tests has been relatively well established in adults (Elias, Elias, Sullivan, Wolf, & D'Agostino, 2003; Fagundo et al., 2012). Recent work suggests that the relationship of obesity and cognitive functioning may not be limited to grown-ups only. It can also be observed in children and adolescents. Some of the studies reported a negative association of cognitive functions and childhood obesity specifically in the realm of intelligence (Miller et al., 2006; Yu, Han, Cao, Guo, 2010), executive functions (Lokken, Boeka, Austin, Gunstad, & Harmon, 2009; Schwartz et al., 2013; Verdejo-Garcia et al., 2010) and memory (Abdel-Nabi, Kalifa, Ahmed, Eskander, & Sayed, 2010; Li, Dai, Jackson, & Zhang, 2008).

Overall literature supports the negative association of obesity and neuro-cognitive functioning. However, there is a gap with regards to the association of obesity and specific cognitive functions such as general intellectual functioning, learning, memory, language and visuo-spatial skills (Liang, Matheson, Kaye, & Boutelle, 2013).

Psycho-social aspect of obesity is related to the interrelation of social factors and individual thought and behavior such as, self-esteem, stress, body shape concerns and eating behavior,

insecurity, psychopathology, impulsivity. Research on the psychosocial aspects of obesity has grown extensively over the years, from purely theoretical articles to cross-sectional comparative studies of people with and without obesity to longitudinal investigations of the temporal sequencing of obesity and psychopathology (Fabricatore & Wadden, 2004). As we all know that the changing lifestyle of children in the so call modernized India has led to increased hours of inactivity often attributed to mounting academic pressure and competitive stress. Stress has been seen as an important psychosocial contributor to obesity and stressed children are more prone to indulge in emotional overeating (Puhl & Latner, 2007; Vaidya, 2006). Obesity also has significant negative impact on the emotional development of a child. Obese children present with more psychosocial problems, and if not attended, they may worsen and affect the child's attempts to lose weight. Despite their best attempts when children are not able to lose weight they experience stress, disappointment and other negative emotions, which further lead to emotional overeating and physical inactivity and even more increase in weight, thus perpetuating the vicious cycle. To break this vicious cycle, it becomes imperative for health professionals to integrate psychosocial assessment of obese children into their clinical evaluations, which is also suggested by a recent review (Latzer & Stein, 2013).

Considering the due importance of all the above factors and suggestions obtained from previous studies, the aim of this research was to assess the cognitive (attention, memory, visual retention) and psycho-social (body shape concern and insecurity) aspect of childhood obesity. Although, ample of evidence is available on neuro-cognitive and psychosocial aspects of childhood obesity, the need for continued research into these aspects of childhood obesity is important, especially considering paucity of sustained research on this topic in India. This study would add to our knowledge about psychosocial and cognitive aspects associated with obesity as a first step. Furthermore, the knowledge and better understanding of these factors enables us to tailor prevention and intervention strategies as per the need of the target group.

REVIEW OF LITERATURE

Maayan et al., (2011) examined the relationship between obesity, executive functions and disinhibition. A total of 91 adolescents (obese=54, lean=37) were assessed for various frontal lobe functions and neuro-structural deficits using Controlled Oral Word Association Test (COWAT), Trail Making Test part A & B, Stroop Test, Wide Range Assessment Of Learning and Memory (attention concentration index and working memory index) and Magnetic Resonance Imaging (MRI). Obese children performed significantly poor on all the tasks measuring executive functioning mean. The performance of obese adolescents was found to be significantly poor on the tasks of inhibition ($P<0.001$), attention ($P<0.001$), cognitive flexibility ($P=0.008$), verbal fluency ($p=0.032$), working memory ($p<0.001$) and attention/concentration ($p=0.012$) compared to the lean adolescents. Obese group showed significant decrease in grey matter volume of orbitofrontal cortex, a brain region responsible for behavioural inhibition and impulse control. Li et al., (2005, 2008) found significantly poor performance of overweight

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children on Digit Span Test of working memory and attention. Li, Dai, Jackson, & Zhang (2008) reported independent associations between increased BMI and cognitive functioning (visuospatial organization and general mental ability) after adjusting for a number of other factors such as hours of TV watching, physical activity involvement, psycho-social development, blood pressure, parental/familial characteristic and serum lipid profile. However, the associations between increased BMI and academic performance were not significant after adjusting for parental/familial characteristics.

Early Onset Morbid Obesity obtained significantly lower scores on different cognitive functions and had more behavioural problems than control subjects. Brain MRI revealed white matter lesions in 5 participants with Early Onset Morbid Obesity and 6 subjects with Prader-Willi Syndrome the study reported association of Early Onset Morbid Obesity with lower intellectual ability in children. The performance of obese adolescents was poor compared to the controls on inhibition, mental flexibility and decision making however no significant difference was observed in the EF domain of working memory, planning and reasoning (Miller et al., 2006).

Erermis et al., (2004) compared the psychopathology types and frequency among clinical obese (n=30). All the participants were assessed on Child Behavior Checklist, Children Depression Inventory, Rosenberg Self-esteem Scale, Eating Attitude test and non-structured psychiatric interview. The ratio of psychopathology (depression), behavioural problems and low self-esteem was higher among clinical obese adolescents compared to non-clinical obese group. In another study Tanofsky-Kraff et al., (2004) examined psychopathology in non-treatment seeking overweight and normal weight aged 6-13 years. Results revealed no significant group differences on self-reported depression and anxiety as assessed on Children's Depression Inventory and State-Trait Anxiety Inventory for Children (STAIC). However, parent reported internalizing and externalizing scores were higher among overweight children compared to normal weight controls.

Obesity and Psychological Issues

Several studies found association of childhood obesity with number of psycho-social aspects such as reduced academic and social performance, poor quality of life, social discrimination, teasing, lower self and body esteem with neuro psychological dysfunctions (Latzer and Stein, 2013). There is lack of significant evidence for the direct causal link from obesity to depression. It was concluded that obesity might not directly cause depression in adolescents but other indirect pathways and experiences such as stressful life events, peer victimization and weight based teasing may lead to depression in obese adolescents Nemiary, Shim, Mattox & Holden (2012).

Mond et al. (2011) assessed 806 adolescents (female=366 and male=440) using self-reported measures of body dissatisfaction, emotional well-being (self-esteem and depressive mood),

height, weight and socio demographic information at early adolescence (mean age=12.8 years) and late adolescence (17.3 years). It was found that after controlling the body dissatisfaction, the associations between obesity and low self-esteem was not significant at both of the stages and in both genders. Pine, Goldstein, Wolk, & Weissman, (2011) in a study showed positive association of childhood depression and adult BMI longitudinally after controlling for number of other factors such as (age, sex, social class, pregnancy or medication history and use of cigarette or alcohol). Authors concluded that overall duration of depression in childhood emerged as a strong predictor of elevated adulthood BMI.

Van den Berg et al. (2011) revealed significant association of overeating, impulsivity and reward responsiveness with childhood BMI. Further analysis confirms the hypothesis that the personality characteristics of impulsivity and reward responsiveness were indirectly associated with BMI through overeating. Author concluded that these personality characteristics are risk factors for obesity in children. Puder and Munsch (2010) studied psychological correlates of childhood obesity and reported higher prevalence of behavioural and emotional problems in clinical, treatment seeking samples of obese children. They found specific externalizing (impulsivity and attention-deficit hyperactivity disorder), internalizing (depression and anxiety), and uncontrolled eating behaviour as the most often reported psychosocial factors in obese children. The relationship between obesity and psychological problems can be understood as a bi-directional process wherein significant psychological distress may foster weight gain and on the other hand obesity may lead to psychosocial problems. Braet, Mervielde, and Vandereycken (1997) suggested that clinical sample of obese children have higher risk of developing psychopathology compared to the non-clinical obese children.

Obesity and Body shape concern

Obese children express higher body dissatisfaction and lower self-esteem than their normal weight and overweight controls. Higher level of body dissatisfaction also mediates the association between obesity and self-esteem. Therefore, body dissatisfaction is strongly associated with childhood obesity and acts as a predictor of low self-esteem and higher level of depressive symptoms in obese children (Shin and Shin, 2008).

In a study, Allen et al. (2006) did a cross-sectional study and reported that overweight children were more concerned about weight and shape than healthy weight controls. Further analysis revealed, children with high concern for weight and shape also reported to have lower self-esteem, depression and higher level of body dissatisfaction than children with low concern for weight and shape. Wardle and Cooke (2005) also reported the association of obesity and body dissatisfaction is well supported in children and adolescents. Overweight status, female gender and binge eating as a risk factor for body image disturbances and psychological distress in obese individuals (Schwartz and Brownell, 2004; Young-Hyman, et al. 2003).

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Vander Waland Thelen (2000) compared eating behaviour and body image concerns of obese and normal weight children. Results revealed that obese children were significantly more likely to engage in dieting behaviours and restrained eating compared to the normal weight children. Obese children also express more weight concern and more dissatisfaction with their body image than normal weight children. Gender based analysis revealed girls were more likely to exhibit these behaviours than were boys.

METHOD

Aim:

To study Cognitive and Psychosocial effects of childhood obesity.

Objective of the present study were:

- to compare cognitive functions (memory, attention, and visual-retention) between children with normal weight and children with obesity.
- to assess the difference in psychosocial aspects (body shape concern, and insecurity) between children with normal weight and children suffering from obesity.

Hypotheses:

H₁. There will be a significant difference in cognitive functioning (memory, attention, and visual-retention) in obese children and normal weight children.

H₂- There will be a significant difference in psychosocial functioning (body shape concerns, insecurity) in obese children and normal weight children.

Study Design

The current study adopted a cross-sectional design.

Sample and Sampling Technique:

The present research used purposive sampling as a method for data collection. The sample selected for this study was a total of 60 children (both male and female) with 30 obese children and 30 normal weight controls. Inclusion and exclusion criteria are mentioned below:

Inclusion Criteria:

- Obese children as per BMI, ICMR($BMI \geq 30 \text{ Kg/m}^2$)
- Age range- 10-14

Exclusion Criteria:

- Children suffering with previous history of significant head injury or other significant physical, medical or neurological problems.
- Children suffering with chronic any medical illness and any other metabolic disorders like diabetes and thyroid.

Measures

Mohsin's security insecurity test: The MSIT is a measure of social and emotional security and insecurity developed by Dr. S.M. Mohsin (1979). It consists of 60 items which covers characteristics like social security, suitableness, friendliness, emotional stability, optimism, and self-confidence versus social insecurity, egocentricism, distrust, emotional instability, pessimism and dejection. It is a five point likert scale.

Body Shape Questionnaire-8C: It is a measure of body image disturbances, originally developed by Cooper et al. (1987). Evans and Dolan (1993) later developed the short version of Body Shape Questionnaire known as BSQ-8C which contains 8 items. It is a self-report questionnaire requiring subjects to answer on six point forced choice scale.

Digit symbol: PGI-Memory scale for children was developed by Kohli et al., (1998). Its items were adopted from PGI-Memory scale for adults developed by Pershad & Wig (1977). Digit symbol is a subtest of PGI-Memory scale of children, which assess the visual retention of dissimilar pair. For each correct answer 1 mark is provided and maximum score obtained is 100. The test-retest reliability after the interval of one month was found to be 0.82.

Immediate memory test: Immediate memory test is a subtest of Bhatia battery test developed by Dr. C.M Bhatia (1955). This assesses immediate memory verbally by repeating the digits directly and reversely. One mark each for the number of digits reproduced directly and reversely. The maximum possible score provided for direct reproduction is 9 and for indirect reproduction are 6. The validity of the test is and reliability is 0.86 and validity is .84.

Procedure

The sample for present study were recruited from three schools of Delhi. Total 72(normal weight 42 and obese 30) children were screened for the study. However, 12 children were not included as 7 of the children were under weight and 4 of them did not met the criteria and 1 did not complete the assessment.

At first height and weight of children was measured to calculate the BMI followed by the screening assessment based on the specified inclusion/exclusion criteria, and then the questionnaires on BSQ-8C and MSIT was conducted with a short break in between and then digit symbol test and immediate memory test was administered individually. The assessment session took around 30 minute to complete and all the records were entered manually.

RESULT AND DISCUSSION

India is adapting the western culture and lifestyle; it is changing in a rapid way and following the trend of other countries where children are steadily becoming obese. Childhood obesity and overweight has become an emerging problem in India as learned by the recent researches of childhood obesity. In Indian literature there are many studies regarding prevalence of childhood obesity though there is scarcity of studies that address cognitive and psycho-social aspect of Indian obese children, thus this provided me the motivation to work on this research.

The aim of the study was to assess the cognitive and psycho-social aspects of childhood obesity. According to the objective of the study, scores on cognitive functions (memory, attention, and

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visual-retention) and psycho-social function (insecurity and body shape concern) of obese and normal weight children were compared.

TABLE 1: Comparison of normal and obese children on BSQ-8C, MSIT, Digit Symbol and Immediate Memory (Direct and Reverse)

	NORMAL(N=30)		OBESE(N=30)			
Variables	Mean	Sd	Mean	Sd	Df	t-value
BSQ-8C	16.43	4.7	31.27	3.7	58	5.77**
MSIT	204.5	24.12	123.07	38.6	58	2.14*
DIGIT SYMBOL	70.9	20.24	40.07	18.7	58	2.20*
IMT-D	5.2	1.2	3.4	0.99	58	2.15*
IMT-R	2.5	1.73	1.43	1.2	58	0.0087

*significant at 0.05 level, **significant at 0.01 level

The mean score obtained by obese and normal weight children on BSQ-8C was 31.27 (sd= 3.7) and 16.43(sd= 4.7) respectively. The t-value was 5.8 ($p < 0.01$). The body shape concerns was high in obese as compared to normal weight children.

The mean score obtained by obese and normal weight children on MSIT was 123.07(sd=38.6) and 204.5(sd= 24.1) respectively. The t-value was 2.14($p < 0.05$). The normal weight children are more secure than obese children about their body shape image. Thus the children with normal weight have scored higher than obese.

The obese and normal weight children scored mean on digit symbol was 40.07(sd=18.7) and 70.9(sd=20.24). The t-value was 2.20($p < 0.05$). The normal weight children have performed better on Digit Symbol Test as compared to obese children.

The score of mean obtained on IMTD by obese and normal weight children was 3.4(sd=0.99) and 5.2(sd=1.2) and on IMTR was 1.43(sd=1.2) and 2.5(sd=1.73) The t-value for IMTD was 2.15 ($p < 0.05$) and for IMTR was 0.0087($p > 0.05$). The normal weight children have performed better on IMTD as compared to obese children and there is no difference in the performance of normal weight children and obese children on IMTR.

However, this study showed a marked difference in the cognitive and psychosocial functioning of obese children and normal weight children. The obese children have performed poor in cognitive test as compared to normal and showed more issues in psycho-social functioning of obese children than normal weight children.

Thus, the present study on the cognitive and psycho-social aspects of obesity helps to create awareness among people about the various difficulties faced by obese children, not only in

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physical domain but also cognitive and psycho-social domains. In this regard, one can better understand and take appropriate measures in planning early intervention for such difficulties faced by obese children, and thus deal with the global issue of obesity as early as possible.

Several studies have shown a negative relationship between obesity and neuro-cognitive and psycho-social functioning of children (Brook et al., 2009; Li et al., 2008). Obese and overweight children experience more behavioural issues than normal weight children. Though, many current studies have also reported contradictory finding with regard to cognitive and psychosocial functioning of obese children and are proposed for further examination to expand knowledge in this area (Liang et al., 2013).

CONCLUSION

The current research focused on the cognitive and psychosocial effects of obesity. It can be concluded that cognitive and psychosocial functioning plays a significant role in obesity as the obese children were found to be poor compared to the normal weight controls. The performance of obese children on memory and visual perception and retention abilities was also lower compared to normal weight controls. Body shape concerns were also high in obese children compared to normal weight controls and majority showed marked concern with their body shape. Obese children experience more insecurity about their body image than normal weight children. Thus obesity is not only related to health risk factors but cognitive and psychosocial issues also.

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Conflict of Interests

The author declared no conflict of interests.

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Stepping Ahead Towards Harmonious Passion: Mediating Role of Self-Compassion

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ABSTRACT

Nothing great in the world has ever been accomplished without passion. Passion is the strong emotion with inherent behavioural tendencies that can be positive as long as reason underlies the behaviour and this can be either harmonious or obsessive in nature. Thus, this view of passion suggests that adaptive benefits will accrue when individuals are in control of their passion (i.e. Harmonious passion). Moreover Self-compassion is found to elicit increased desirable and productive intrinsic motivation and helps individual perceive any activity as enjoyable or engaging. Thus, the present study adds on as a stepping stone which aims at studying the mediating role of Self-compassion in the relationship between Intrinsic motivation and Harmonious passion by incorporating Correlational research design and maximum variation sampling method (type of purposive sampling) in drawing 120 samples of working emerging adults (experience 0 – 3 years). Standardized tools; Global motivation scale (Guay et. al 2003), Self-compassion scale (Raes et. al 2010), Passion scale (Vallerand et. al. 2003) were used. Statistical measures Mean, S.D, Pearson's Product Moment Correlation and Meditational analysis was used in assessing the data and obtaining the results. And the findings showed that there was a direct effect of 0.192 between Intrinsic Motivation and Harmonious Passion and indirect effect of 0.2793 between the same in presence of the mediating variable Self-Compassion. Thus, it can be concluded that self-Compassion mediates the relationship between Intrinsic Motivation and Harmonious Passion. Self-Compassion training during the initial period of work or even further will help individuals to develop and experience Harmonious Passion attributing to various positive aspects of individual's life.

Keywords: *Intrinsic Motivation, Harmonious Passion, Self-Compassion, Emerging Adults.*

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“I am born different and unique”. This anecdote universally defines every single individual. It is not just the saying but then all of us are in fact unique in our own ways. Since our early developmental stages we engage ourselves in one or the other task or activity. Indeed, individuals who wake up in the morning with a smile on their face “because today is basketball day,” musicians who practice several hours per day in the hope of achieving excellence, and scientists who spend years researching a phenomenon all have a passion activity that makes their lives worth living. Passion can fuel motivation, enhance well-being, and provide meaning in everyday life (Vallerand et al. 2003). Spinoza (1632–1677) proposed that acceptable thoughts originated from reason whereas unacceptable thoughts derived from passion. People afflicted with passion experienced a kind of suffering, in line with the etymology of the word *passion* (from the Latin *passio* for suffering). Rene Descartes (1596 –1650) defined passion as defined as strong emotions with inherent behavioural tendencies that can be positive as long as reason underlies the behaviour has always fascinated the philosophers and researchers in psychology. But in its variant perspective, and also with lack of empirical supports when it comes to developing and experiencing harmonious or adaptive type of passion in particular it becomes important to have further researches adding on to existing literature. And in accordance to the same, few existing literature states there exists a relationship between Intrinsic Motivation; defined as behaviour that is driven by internal rewards and Harmonious Passion; experienced When people engage in activities and pursuits that are inherently enjoyable or aligned to their identity, they feel they have chosen these endeavours (Vallerand et.al, 2003). Furthermore the grounds in this area of research have come across with findings that self-compassion; defined as acting same way towards oneself when one is having a difficult time, failure and notice something one don’t like about oneself (Neff, 2003) helped individual experience increased intrinsic motivation and thus making the activity they are engaged in more enjoyable.

Now when we look back on these processes, it seems as if most of us undergo the same path of development but then with different means. So if it is different means for different individual then there must be various things and factors that differentiate each of us. During the early developmental stages it would have been named as our personal likings and further turned to be our unique individualized interests (Gottfredson, 2005). Being more specific it’s more the “Interest” that which helps and guides us in making important choices of our life; be it in personal, education, career, and so on. And if we try looking it in deeper sense everything we had done, doing, planned to do in future all these connects us with our interests or even can be termed as our “origin of choices” (Lent, Brown, & Hackett, 1994). When the choices are made of our interests it gives a kind of satisfaction and so we follow the same pattern in making decisions and this may be beneficial until one completes his or her education even though there might have been some minor problems. Hence, till the period of late adolescence everything is somehow managed. But then later when one enters the transitional period of emerging adulthood then arises the confusions, problems etc., as it is the period where most of them begin their work life or start making career choices (Peterson, & Seligman, 2004). As like earlier times career choices

are also chosen based on the “interest” of the individual. But how far their decisions have been appropriate for them becomes a question because this developmental period is one of the crucial transitional periods in life. And it has always attracted researchers to understand its nature and contribution in fulfilling life’s goal (Perrone, Sedlacek, & Alexander, 2001; Roach, & Sauermann, 2010). Arnett (2000) stated that emerging adults want a lot out of life – a job that’s well paid and personally meaningful and a lasting bond with a partner. Many might be headed for disappointment, he says, nothing that most employers simply want someone who can get a job done and half of all marriages end in divorce. Adding to work life decision; Work plays an eminent part in individuals life be it to earn daily bread or to satisfy one’s basic needs and wants. ‘Work’ is defined as an activity involving mental or physical effort done in order to achieve a result. From the famous saying that “The difference between a successful person and others is not a lack of strength, not a lack of knowledge, but rather a lack of will” it can be comprehended that interest and passion plays important role in one’s life (Lombardi, 2002). Furthermore, Arnett (2000) describes the period following emerging adult is the young adulthood; It begins with the adoption of adult roles, such as marriage, parenthood, and a stable occupational path. (Late twenties through the thirties). Henceforth, only if there is a healthy development and growth during emerging adulthood at both personal and work life it will have an positive influence over the young adulthood and as well the further developmental stages. Pertaining to the first characteristic feature (i.e. Identity exploration), there flourishes the term “Interest”. But due to the negative impact of instability, feeling in between over interest there can be chances of decline in interest or even create various problems. Whereas, from the past empirical evidences it can be concluded that interest can be manifested to “Passion” which will attribute in better work-life satisfaction and individual’s wellbeing (Vallerand, 2012; Johri, & Misra, 2014). Research studies shows that interest is manifested into passion by the means of evaluation of the activity and internalization of the representation of the activity in one of the core aspect of the self, namely one’s identity (Deci, Vallerand, Pelletier, & Ryan, 1991; Vallerand, Pelletier, Blais, Briere, Senecal, & Vallieres, 1992; Vallerand, & Blssonnette, 1992).

Many individuals feel passionate about their work. They enjoy their role. For many people, this passion can promote well-being and satisfaction with life. But, for other people, this passion can actually culminate in burnout and dissatisfaction (Vallerand, 2008, 2010). The dualistic model of passion can explain this observation. According to this model, some people experience harmonious passion. That is, they feel they have chosen to embark in this career or pursuit. Consequently, they also feel they can engage or disengage from this passion whenever they choose. Consistent with self-determination theory, this sense of choice tends to promote wellbeing. Other people, however, may experience obsessive passion (Mageau et al. 2011). They feel almost compelled to pursue this passion. That is, if they resist this passion, they feel they will experience negative consequences, such as a decline in their status or self-esteem (Mageau, & Vallerand, 2007). Consequently, they cannot choose to disengage from this passion. Indeed, this passion may even conflict with their other needs or goals, ultimately compromising their

wellbeing. Indeed, many studies indicate that harmonious passion is positively associated, and obsessive passion is negatively associated, with various indices of wellbeing. These relationships tend to persist even after related states, such as commitment or work holism, are controlled (Vallerand, 2008). Vallerand et al. (2003) believed that passions “make life worth living” depends on the type of passion one has developed. That is, whether a passion will foster positive affect and healthy persistence depends on whether it is harmonious or obsessive. With respect to affective outcomes, Harmonious Passion should lead to greater positive affect and less negative affect than Obsessive Passion during task engagement. This is because the autonomous internalization of the activity leads the person to engage in the task in a more flexible manner and thus to experience task engagement more fully (Vallerand et al. 2007). Such a flexible form of activity engagement should facilitate better concentration and the experience of positive affect, absorption, and flow. Such is not the case for Obsessive Passion, because a controlled internalization breeds an internal compulsion to engage in the activity, leading to a more rigid and conflicted form of task engagement. Such pressured engagement should prevent the person from fully focusing on the task at hand and take away the positive affective outcomes that would normally be experienced (Vallerand et al. 2003; Vallerand, Paquet, Philippe, & Charest, 2010). Furthermore, Harmonious Passion also contributes to the experience of positive affect and minimizes the experience of negative affect after task engagement. This is because with HP, people are in control of the activity. They can decide to engage or not in the activity and when. Consequently, very little conflict will exist between the passionate activity and other activities in the person’s life. However, with Obsessive Passion, an internal compulsion leads the person to engage in the activity even when he or she should not, thus causing conflict between the passionate activity and participation in other tasks. The person may therefore experience negative emotional experience once engagement in the passionate activity is terminated (Vallerand et al. 2007). Finally, because Obsessive Passion controls the activity of the person, an individual is likely to experience negative affect when prevented from engaging in the activity. Indeed, because of the internal pressure to engage in the passionate activity, it is impossible to disengage fully from thoughts about the activity (Lalande et al. 2015). Thus, the person will be distracted when working on other activities because they were prevented from doing their passion. The person will feel frustrated and upset about not being able to engage in the passionate activity as well as from not being able to experience pleasure in the competing activities (Stenseng, 2008; Mageau, Carpentier, & Vallerand, 2011; Stenseng, Rise, & Kraft, 2011).

Even though three variables were closely and positively related past researchers were not found connecting all the three variables together. Thus the present study dealt in studying the relationship between Intrinsic motivation and Harmonious Passion in presence of the mediating variable Harmonious Passion and hence, making way for better understanding of development and experiencing of Harmonious Passion. The population comprised of working emerging adults as it is the transitional period where the individual has demographic diversity and

instability, reflecting the emphasis on change and exploration characterized by pervasive changes in autonomy, residence, identity, social roles and career pursuits (Arnett, 2004). Only when there exists a work-life satisfaction, it accounts for the smooth functioning of the individual in various areas of his or her life and hence, developing harmonious passion would help in having better life satisfaction and also psychological wellbeing (St-Louis, Carbonneau, & Vallerand, 2016). Even though shaping of passion may occur during any age period, but then as most of the characteristic features of the age ranging from emerging to young adulthood holds the actual ground for healthy shaping of passion, and personality. Henceforth; Research in this population grabs more attention of the researchers as only few researches are done on this area of research and in India, hardly any empirical evidences are traced. From the past empirical evidences it is figured that there exists a well-established framework right from the individual's interest till his or her psychological adjustment and well-being. But then the important pathway towards harmonious passion is neither been discussed or studied until now. And also researchers in this area in India are comparatively very less and so it becomes an importance to study and understand this process further. Thus, this establishes the basic foundation or need to carry out

METHODS

Sampling Design

Present study has opted for Correlational research design. The researcher begins with the idea that there exists a significant relationship between the variables. For that, maximum variation sampling (a type of purposive sampling) method was implemented to collect samples. It is also known as heterogeneous sampling, used to capture wide range of perspectives relating to the interested area of the present study. People, pieces of data, events or units under the study may exhibit a wide range of attributes, behaviors, experiences, incidents, qualities, situations, and so forth. And the basic principle behind this type of sampling is to gain greater insights into a phenomenon by looking at it from all angles. Present study worked with an assumption that work sector, work environment, nature of the work, has no significant role in developing harmonious passion or adaptive type of passion. Meaning, passion can be developed and experienced by an individual who has interest towards the work, and also possess intrinsic motivation. And so the study has opted to consider people under different work sector (heterogeneous in nature). A sample of 120 emerging adults from different work sector from Bangalore and Mangalore were chosen.

Materials Used

Intrinsic Motivation

Global Motivation Scale by Guay, Vallerand, & Blanchard (2001) used to assess global motivation toward behaving in general in their life as a whole. There are 28 items (4 items for each of the 7 subscales) assessed on a 7-point likert scale range from "7 = strongly agree" to "1 = strongly disagree". The high score represents the high motivation. The GMS has demonstrated high levels of construct and concurrent validity as well as internal consistency. Cronbach's

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Alpha for the subscales ranged from 0.69 to 0.93. In the present study, only 3 constructs such as “Intrinsic motivation - to know”, “Intrinsic motivation - toward accomplishment”, “Intrinsic motivation - to experience stimulation” were used. The scale has showed a reliability of .77, the consistency of intrinsic subscale showed a reliability of .80, .79 and .82 respectively.

Self-compassion

Self-compassion Scale by Raes, Pommier, Neff, & Van Gucht (2011) used to measure the person's ability to hold one's feelings of suffering with a sense of warmth, connection and concern. The scale consisted of 12 items both positive and negative items with rating scale from 1 – 5; never to always (short version of 26 items scale) *Self-Kindness Items*: 2, 6, *Self-Judgment Items*: 11, 12, *Common Humanity Items*: 5, 10, *Isolation Items*: 4, 8, *Mindfulness Items*: 3, 7, *Over-identified Items*: 1, 9. Subscale scores are computed by calculating the mean of subscale item responses. The SCS–SF demonstrated adequate internal consistency (Cronbach's alpha 0.86 in all samples) and a near-perfect correlation with the long form SCS ($r \geq 0.97$ all samples). Confirmatory factor analysis on the SCS–SF supported the same six-factor structure as found in the long form, as well as a single higher-order factor of self-compassion. The SCS–SF thus represents a reliable and valid alternative to the long-form SCS, especially when looking at overall self-compassion scores (Van Dam, Sheppard, Forsyth, & Earleywine (2011).

Passion Scale

Passion scale by Vallerand et al. (2003) used to measure passion in the workplace situation. It consists of 14 items distributed into two subscales harmonious passion and obsessive passion. response are given based on a likert type scale from 1 – 7 where, “1= not agree at all” and “7 = very strongly agree”. Reliability scores in the passion scale have ranged from 0.78 to 0.88 (Marsh et al 2013). In the present study only the items assessing harmonious passion was used. Moreover, in the present study sample, the Cronbach's Alpha score ($\alpha = .93$) ascertain the adequate reliability of the scale.

RESULTS

Insert Table 1 about here

Table 1 depicts the correlation results of the variables under study (Intrinsic motivation, self-compassion and Harmonious passion). The table shows a positive and significant correlation between all the variables. Independent variable Intrinsic motivation has shown a significant correlation with the mediated variable self-compassion at 0.01 level ($r = .81$). Intrinsic motivation, the independent variable has demonstrated a significant positive correlation with the dependent variable Harmonious passion at 0.01 significant level ($r = .61$). Mediating variable self-compassion also has a significant correlation with the dependent variable at the 0.01 level ($r = .77$, $p < 0.01$).

Insert Table 2 about here

Table 2 portrays the results of Mediation Analysis. The obtained F value 41.6715 for df (1,118) that tested the Regression Model of intrinsic motivation predicting self-compassion was found to be significant at .000 level. The obtained R^2 value is .2610. The coefficient value of intrinsic motivation predicting self-compassion (a) is .4791 and the standard error value for the same is .0742 which is significant at .000 levels. The self-compassion constant (i1) value is 17.5048 and the standard error value is 3.8507 which is significant at 0.000 level.

The obtained F value 139.0409 for df (2,117) that tested the Regression Model of intrinsic motivation predicting harmonious passion through self-compassion was found to be significant at .000 level. The obtained R^2 value is 0.7039. The coefficient value of self-compassion predicting harmonious passion directly (b) is 0.5204 and the standard error value for the same is .0453 which is significant at 0.001 levels. The coefficient value of intrinsic motivation predicting harmonious passion (c') is 0.1929 and the standard error value for the same is .0425 which is significant at .001 levels. The harmonious passion constant (i2) value is 9.7053 and the standard error value is 2.0561 which is significant at .001 level.

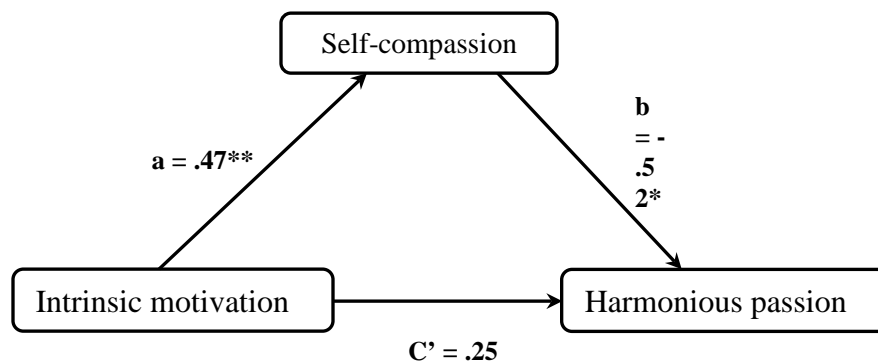


Fig 1. Standardized regression coefficients for the relationship between intrinsic motivation and harmonious passion as mediated by self-compassion.

The relationship between Intrinsic Motivation and Harmonious Passion was mediated by Self-Compassion. Figure 1 illustrates the standardized regression coefficient between Intrinsic Motivation and Self-Compassion was statistically significant, as was the standardized regression coefficient between Self-Compassion and Harmonious Passion. The standardized indirect effect was $(.47) (.52) = .2493$. The values were tested for the significance of this indirect effect using bootstrapping procedures. The bootstrapped unstandardized indirect effect was .2793. Thus, the indirect effect was statistically significant.

Rather than a direct causal relationship between the independent variable and the dependent variable, a mediation model proposes that the independent variable influences the (non-

observable) mediator variable which in turn influences the dependent variable. Thus, mediator variable serves to clarify the nature of relationship between the independent and dependent variable. Thus accepting the hypothesis, Self-Compassion mediates the relationship between Intrinsic Motivation and Harmonious Passion among working emerging adults.

DISCUSSION

Passion has always fascinated the philosophers and researchers in psychology. But in its different perspective, and also because of lack of empirical support when it comes to developing and experiencing harmonious passion in particular. It has remained more like a question. Whereas, with further reading and reviews there was some link traced between Intrinsic Motivation, Self-Compassion and Harmonious Passion and also with regards to the population of emerging adults. Thus, the purpose of the study is, as mentioned before, to find out whether Self-Compassion mediates variable between Intrinsic Motivation and Harmonious Passion among working emerging adults. The primary objective was to assess the relationship between Intrinsic Motivation and Harmonious Passion, as there were only few research evidences stating a positive relationship between these variables especially when considered in India. Even the present study revealed that there was a significant positive relationship between these variables. The next objective of the study was to assess the mediating role of Self-Compassion in the relationship between Intrinsic Motivation and Harmonious Passion. This was totally based on the assumptions made on the basis of existing literature which stated that there exists a positive relationship between Intrinsic Motivation and Self-Compassion, Intrinsic Motivation and Harmonious Passion that, if an individual possess Intrinsic Motivation then it will attribute for his Harmonious Passion and more over if the individual also possess Self-Compassion along with Intrinsic Motivation then that can attribute in developing and experiencing Harmonious Passion at a greater level (Vinu, & Vinothkumar, 2014). Moreover, introducing the mediating variable was again based on assumptions with regards to the common characteristics shared between Self-Compassion and Harmonious Passion, as there were research finding related to this area (Breines, & Chen, 2012). The study findings show that Self-compassion mediates the relationship between Intrinsic Motivation and Harmonious Passion among working emerging adults. And thus, accepting the hypothesis stated. Mediation is an important effect caused through the variable Self-compassion. This also leads to a numerous implications with respect to the three variables. But before that, let us see how the mediation effect works with respect to this relationship between these variables. When the individual possess Intrinsic Motivation, according to this study he/she develops and experiences harmonious passion to a certain level. Thus, connecting to the previous point if he or she possesses Intrinsic Motivation along with Self-Compassion then they will develop and experience increased Harmonious Passion. Meaning as expected the results showed that the indirect effect that is effect of independent variable (Intrinsic Motivation) on dependent variable (Harmonious Passion) in presence of the mediating variable (Self-Compassion) was more by almost 70% when compared to that of direct effect of

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the independent variable (Intrinsic Motivation) on the dependent variable (Harmonious Passion) which was only 26%.

As , there were no much existing literatures pertaining to that of developing and working on Harmonious Passion; this present study will not just add on to the literature but it has given a new path to help individuals develop and experience the adaptive type of passion.

Meaning, if the fresher's and the workers with minimum period of work experience are assessed for their level of Intrinsic Motivation and then trained with Self-Compassion training; then it will help them develop and experience the Harmonious Passion. This in turn will attribute to their work performance, pursuit of other opportunities, psychological adjustment and well-being. Apart from which, it becomes easier to overcome stress and burnout, neglect of alternative goals and moreover, work life can be balanced. And from existing literature we can say that job satisfaction will give rise to life satisfaction as well and henceforth, attributing to individual's existential fulfillment. Developing Harmonious Passion can even bring positive changes in the personality and thus increasing their intrapersonal and interpersonal relationships. And help in reaching the set goals, developing more effective skills, achieving one's standard is beneficiary to both the individual and the institution. This can even be applied in educational; vocational training set up like music schools, dance schools, chess school, sport training centers to enhance individual's Harmonious Passion. Moreover, Mindfulness-based Self- Compassion training is based on the Buddhist virtue of eastern perspective. Henceforth, applying this in eastern countries like India will bring in a lot of difference in the individual and individual's way of leading life (Brown, & Ryan, 2003). If the signature strengths are identified and then the individual is helped to experience Harmonious Passion then it can help foster those signature strengths, like for example creativity can be fostered by experiencing Harmonious Passion.

On the whole, from the research finding of the present study; it can be stated that there is a wide range of areas where this can be applied and it can bring out drastic positive outcomes, not just to the individual but also related to his existence. And the present study becomes the stepping stone for further researches in this area.

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Conflict of Interests

The author declared no conflict of interests.

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Tables

Table 1 Mean SD, Correlation between Intrinsic motivation, Self-compassion, and Harmonious passion

Sl.No	Variables	Mean	SD	1	2	3
1	Intrinsic motivation	51.60	5.46	-		
2	Self-compassion	42.22	5.13	.81**	-	
3	Harmonious passion	41.63	3.97	.64**	.77**	-

** Correlation is significant at the 0.01 level (2-tailed).

Stepping Ahead Towards Harmonious Passion: Mediating Role of Self-Compassion

Table 2 Mediation analysis relating self-compassion as a mediating variable between intrinsic motivation and harmonious

Consequent						
Self-Compassion				Harmonious Passion		
Antecedents	Coefficient	SE	P	Coefficient	SE	P
Intrinsic motivation	a 0.4791	0.0742	0.000	0.1929	0.0425	0.000
Self-compassion	-	-	-	0.5204	0.0453	0.000
Constant	i ₁ 17.5048	3.8507	0.000	i ₂ 9.7053	2.0561	0.000
	R ² =0.2610			R ² =0.7039		
F Value	F(1,118)=41.6715 P=.000			F(2,117)=139.0409 P=0.000		

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Gender Differences in Prosocial Behaviour

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ABSTRACT

The objective of current research was to examine the gender differences in prosocial behaviour. Total 60 students (N = 60, 30 Males and 30 Females) participated in the current study from Lovely Professional University, Punjab, India. The Prosocial Personality Battery (PSB) consisting seven dimensions including social responsibility (SR), empathic concern (EC), perspective taking (PT), personal distress (PD), other oriented moral reasoning (O), mutual concern moral reasoning (M) and self report altruism (SRA) has been used in the study to collect the data. The results revealed significant gender differences on two dimensions of prosocial personality battery, i.e. perspective taking ($t = 2.04$, $p < .05$) and other oriented moral reasoning ($t = 2.01$, $p < .05$), being females on the higher side. On rest of the five dimensions the differences were negligible falling far away from the probability level of .05. The results suggest that males and females are both almost equal on most of the prosocial behaviour dimensions. However, in case of perspective taking and mutual concern moral reasoning females are on higher side suggesting that they have better understanding of others' mental state and they are more concerned about morality in the society.

Keywords: *Prosocial Behaviour, Altruism, Helping Behaviour*

Prosocial behaviour is a common and important aspect of every day social life. This behaviour could be viewed as an action intended to help another person's need for support or to promote and sustain a tangible benefit for them. In other words, pro-social behaviour stem from several diverse motives and helps achieving several goals. Considerable studies shows that, through serving and volunteering, young people can convince their own need, learn and express their values, realize the world, get related experience and strengthen social competence and relationships. Individual differences are one of the crucial factors responsible for prosocial behaviour as people differ in terms of personality traits, so some people have altruistic personality others do not. Second, gender is also considered another determinant of prosocial

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behaviour and women are perceived more into nurturing help. That is they are more into empathetic helping, while men are mostly into chivalrous and heroic helping.

Basically in our contemporary world people are facing a lot of challenges especially poverty, insecurity, unemployment, terrorism, internal and external conflict, divorces, singlism, illiteracy etcetera virtually due to low prosocial behaviour or lack of social support from the family, relatives, friends and even community. People are into abject poverty majority of the youths are unemployed and virtually living below one dollar (1.U.S.D \$) which is one of the fundamental factor responsible for the high rate of crime and negative vices bedevilling the society.

Had social support or prosocial behaviour is been effectively applied the challenges would have been minimized. In Indian context, very few studies have been conducted in the area and the present study has filled this gap and provided important insights on gender differences in prosocial behaviour in Indian population.

Penner (1995) has emphasized on social responsibility, empathetic concern, perspective taking, personal distress, altruism, other oriented moral reasoning and mutual concern moral reasoning as important factors of prosocial behaviour. Here, social responsibility refers to the duty of an individual or a person in the society or social settings which he or she is obliged to fulfil or execute. Empathetic concern denotes other oriented emotion, exhibited by and in conformity with the perceived welfare of someone in need, be it feelings of affection, sympathy, kind heartedness or compassion etc. Perspective taking refers to someone's ability to read and understand someone's mental state, for instance thought, feelings or desire and so on. Personal distress denotes any kind of worry be it (anxiety, stress or any negative state of emotion, of another's emotional condition. Altruism refers to when someone develops the interest of helping or promoting the level of some one. Self report altruism refers to the ability to assess introspectively self as altruistic personality. Other oriented moral reasoning denotes thinking situations aimed at determining whether thing is right or wrong. Mutual concern moral reasoning refers to when two or people have the same ideology or perception with regards to a particular thing, whether it is morally right or wrong in the society.

Eisenberg and Fabes (1998) suggested that gender and culture are important indicators of pro social behaviour and they suggested females are slightly high in prosocial behaviour than males. The study of Olukayode Afolabi (2013) examines the relevance of five factor personality factors, gender difference, and emotional intelligence on prosocial behaviour in Nigeria. The results of their study indicated a significant relationship within the variables with respect to prosocial behaviour. Kumar et al. (2016) indicated that there are no significant gender differences on social relationships and adjustment. Erdle et al. (1992) also found that women tend to be on higher side on the measures of helping behaviours. Further they suggested that gender differences prevail in personality correlates of prosocial behaviour. Bihm et al. (1979) also found that females are more likely to help than males. Christopher Einolf (2001) also suggested that in general females

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are more prosocially motivated than males. However, some studies have also given quite opposite results. Feinman (1978) suggested on the basis of his research that men have been found more helpful than women. The studies conducted by Boice and Goldman (1981) suggested no gender differences in helping behaviour. Eagly and Crowley (1986) conducted a meta-analytic review of gender differences in prosocial behaviour and suggested that overall males helped more than females and females got more help than males. However, gender differences in prosocial behaviour were conflicting across different researches.

In Indian context, one study is conducted by Chadha and Misra (2006) and the results of their study indicated no significant influence of age, socio economic status and gender on prosocial behaviour.

METHODOLOGY

Sample

Total sixty (N=60, 30M & 30F) have been selected by convenient sampling method from Lovely Professional University for this study. The age of the participants range from 20 to 30 years and the students belong to diverse disciplines including arts, humanities, science and engineering.

Research Tool

Prosocial Personality Battery (PSB) developed by Professor Liou A. Penner (1995) has been used in the current study to measure seven dimensions of prosocial behaviour. The tool consists 30 items. The dimensions include social responsibility, empathic concern, perspective taking, personal distress, mutual moral reasoning, other oriented reasoning and self report altruism. The coefficient alphas for all the dimensions is Social Responsibility .65, Empathic Concern .67, Perspective Taking .66, Personal Distress .77, Mutual Moral Reasoning .64, Other Oriented Reasoning .77, Self-reported altruism .73, respectively.

Procedure

After selecting the sample the Prosocial Personality Battery had been given to the participants. All the important instructions were given to the participants and it was ensured that they understood all the instructions and precautions for the test. It took about 20-25 minutes to fill the battery. After collecting all the data the Independent Samples t test had been administered through SPSS to analyze the data.

RESULTS AND DISCUSSION

The results of the study had been presented in Table 1. From the table we can see that on most of the dimensions including social responsibility, empathy concern, personal distress, other oriented moral reasoning, mutual concern moral reasoning, self report altruism, the t values range from .43 to 1.88 all falling below the critical value to .05 probability level i.e. 1.98.

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This indicates that there is no significant gender difference on these dimensions of prosocial behaviours. The results go along with the findings of Boice and Goldman (1981) and Chadha and Misra (2006) who suggested no gender differences in prosocial behaviour.

Table 1: Means, SDs and t ratios for prosocial behaviour over the different dimensions among male and female participants

Prosocial behavior dimensions	Male		Female		t value	p value
	Mean	SD	Mean	SD		
Social responsibility	22.90	3.754	21.76	3.43	1.22	.22
Empathy concern	34.50	4.478	36.40	4.78	-1.58	.11
Perspective taking	14.57	2.176	15.83	2.61	-2.04	.046*
Personal distress	8.767	3.036	9.56	2.16	-1.17	.24
Other oriented moral reasoning	8.934	3.172	10.33	2.10	-2.01	.049*
Mutual concern moral reasoning	14.30	4.662	14.83	4.23	-.46	.64
Self report altruism	8.900	2.510	8.63	2.25	0.43	.66
*significant at .05 level						

Further, when we analyse the results of rest two dimensions i.e. perspective taking ($t = 2.04$, $p < .05$) and other oriented moral reasoning ($t = 2.01$, $p < .05$), we find that on both these two dimensions female participants score on significantly higher side indicating that they are more prosocial than males. These findings go along with the studies conducted by Olukayode Afolabi (2013), Erdle et al. (1992), Bihm et al. (1979) and Christopher Einolf (2001) who all found that females are more likely to help than males. However, the findings are not supported by Feinman (1978) who found men as more helpful than women. Overall, the findings go along with the view of Eagly and Crowley (1986) who found gender differences in prosocial behaviour as conflicting across different researches.

In nutshell, we can say that more or less males and females do not differ on prosocial behaviour. However, few studies favour females over males to be more prosocial. The current study present conflicting views suggesting that on two dimensions of prosocial behaviour females are higher but on rest five they seem equal to males. As the sample size of the current study is small, more relevant inferences can be drawn by future researchers by studying large samples on measures of prosocial behaviour.

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Conflict of Interests

The author declared no conflict of interests.

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Gender Difference in Job Satisfaction and Its Relation to Subjective Sense of Well-Being and Level of Happiness in Medical Doctors of West Bengal

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ABSTRACT

The present study deals with gender difference in job satisfaction among the doctors of west bengal. Attempts were also made to assess their subjective sense of well being and the level of happiness. The sample size was 110 divided into 2 groups (male- 67 and female- 43). Each group was consisted respondents age ranging between 22-35 years and having minimum 2 years of job experience. The data were collected from several public sector hospitals of west bengal. Job satisfaction scale, Subjective well being inventory and Oxford happiness inventory were administered to assess the level of job satisfaction, subjective sense of well being and level of happiness. It is revealed that female doctors were found to be more satisfied than male doctors in their job and in case of subjective sense of well being and level of happiness the same result has been found. A significant difference between the gender has been revealed in subjective sense of well being, level of happiness and level of job satisfaction as well. Furthermore, significant correlation has been found between job satisfaction and level of happiness for the entire group of selected sample and a significant correlation could not be drawn between job satisfaction and subjective sense of well being for the present sample. The results of the present study can be fruitful for further research studies.

Keywords: *Job Satisfaction, Gender Difference, Well Being, Happiness.*

The concept of job satisfaction has been developed in many ways by many different researchers and practitioners. One of the most widely used definitions in organizational research is that of Locke (1976), who defines job satisfaction as "a pleasurable or positive emotional state resulting from the appraisal of one's job or job experiences" Locke, E. A. (1976). Others have defined it as simply how content an individual is with his or her job; whether he or she likes the job or not

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(Spector, P.E. (1997). It is assessed at both the global level (whether or not the individual is satisfied with the job overall), or at the facet level (whether or not the individual is satisfied with different aspects of the job). Spector (1997) lists 14 common facets: Appreciation, Communication, Co-workers, Fringe benefits, Job conditions, Nature of the work, Organization, Personal growth, Policies and procedures, Promotion opportunities, Recognition, Security, and Supervision).

Job satisfaction is an important element of employee's behaviour which affects not only the individual's behaviour but also benefited the goal of organization. Actually satisfied employees are more committed to their work. Job satisfaction comes from the variety of ways. Some employees satisfied with their pay structure or compensation, some are with nature of job, promotion, supervision, colleagues, benefits etc. A satisfied employee is free from work stress and they become more productive.

Job satisfaction becomes a major concern for most of the organization. Good organization tries to find out the different approaches regarding employee's satisfaction. Management periodically review responses of their employees on the various function of HR and organizational policy and suggest innovative measures for their satisfaction.

Getting satisfaction from the job it not only concern or effort of management. Individual employee is also responsible for job satisfaction, if, he become more self-aware and learns self aptitudes, ability, values, preferences and interests and be prepared to expressive where they can best contribute and what is important to them.

Several research being studied in the field of Job Satisfaction, show that there are gender differences in job satisfaction. It has been studied that though women's role at work are lesser in position and pay, they have lesser complains of dissatisfaction at work. Job Satisfaction depends on the job characteristics, family responsibility and personal expectation of the employees (Flarencis et.al , 2010). A lot of studies state that women face greater work load stress leading to a lower overall satisfaction compared to men. There is a significant gender difference seen in time management, organisational support, job pressures and pay and increment (Hodson Randy, 1989). The employees' personality and attitude towards women and their growth in the company matter a lot in experiencing a higher job satisfaction as it will not make a difference in one's job satisfaction if being supervised by a woman (Belsky et.al, 1985).

There has been a recent interest in exploring factors influencing job satisfaction with a specific focus on gender differences. Clark (1997) used a large-scale survey to test the proposition that men and women in identical jobs should be equally satisfied. Study results reported that the average job for females was lower in stature and income than for males, yet females reported

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higher levels of job satisfaction. Sousa-Poza and Souza-Poza (2003) report similar findings from a national household panel survey in the Britain. In a study among women working in the private banking sector, Metle (2001) found that job satisfaction declines with increasing levels of education. Metle (2001) argues that higher levels of education tend to increase employee goal and income expectations. Women participating in the study reported gender discrimination in seniority and qualifications.

Men and women working in gender-balanced groups have higher levels of job satisfaction than those who work in homogeneous groups. Employees who work in groups comprised of mostly men tend to show the lowest levels of job satisfaction, and those working in groups of mostly women fall in the middle of the gender-balanced and mostly-men groups (Fields & Blum, 1997).

Pook, Füstös, and Marian (2003) surveyed 932 employees in Eastern Europe to explore the impact of gender bias on job satisfaction. Results suggest that women are less likely to receive help from their managers toward advancement and are less satisfied than men with the work they performed. This may be the result of being assigned less-challenging tasks, non-commensurate with their backgrounds.

Using data from the U.S. National Study of the Changing Workforce, Bender, Donohue, and Heywood (2005) report that overall women have higher job satisfaction than men and have higher job satisfaction in workplaces dominated by women. However, men and women value job flexibility differently, and once this difference is controlled for, gender composition in the workplace plays no role in determining job satisfaction of women.

Gender difference in Job satisfaction is a major concern for organisations in today's global workforce and has been widely studied throughout Organisational Psychological and Managerial literature. The main purpose of the study is to explore the gender difference in job satisfaction among the medical doctors of West Bengal, India and its relations to their sense of well being and level of happiness.

RESEARCH METHODS

Hypothesis:

1. There is a significant difference between the male and female medical doctors regarding Job satisfaction, subjective sense of well being and level of happiness.
2. There will be a significant relationship between the variables (namely, job satisfaction and subjective sense of well being; job satisfaction and level of happiness) of male and female medical doctors.

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Research design:

This existing study is descriptive in its nature. Well, descriptive research can be defined as describing some particular situation, some phenomena or something. Descriptive researches are those which define the current situation instead of inferring and making judgments (Creswell, 1994). The core goal of the descriptive research is to verify the developed hypotheses that reveal the current situation. This kind of research offers information about current scenario and emphasis on the elements that effect the job satisfaction. Furthermore, the current research is comparative in nature, evaluating the Gender differences in Job Satisfaction experienced by male and female medical doctors.

Sample and data:

In order to gather data for understanding job satisfaction, a sample of 110 respondents was asked to take part in a self-administered questionnaire. The respondents for the current study was medical doctors of West Bengal. The total size of the sample was 110 and divide into two groups of gender (male- 67, female-43). The present research uses a non-probability sampling technique that is convenience sampling. Convenience sampling is a procedure that gains and gathers the appropriate information from the unit of study or sample that are suitably accessible (Zikmund, 1997).

Data collection tools and measure:

- a) Job satisfaction was measured using job satisfaction scale by B.C. Muthayya (1973). The scale consisted of 34 items. The answer categories for each of the items were agree(A), not sure (NS), disagree(D) and not applicable(NA). The split-half reliability coefficient of the scale is 0.81. The score range is 0-68.
- b) Level of happiness was measured using oxford happiness inventory (1980s). This inventory consisted of 29 items and each item having four incremental levels of response, numbered from 0 to 3. The items receive the score same as the response given by the subjects, for e.g., response of 1 gets a score of 1. The higher score denotes the higher level of happiness. The score ranges between 0-57. The alpha reliability for the test is found to be 0.92.
- c) Sense of well being was measured by applying subjective well being inventory (Dupey,1970). The scale consisted of 40 items and can be scored by attributing the values 3, 2 and 1 to response categories of positive items and 1, 2 and 3to the response categories of negative items. The minimum and maximum scores that can be obtained are 40 and 120. The test retest reliability for one month is found to be 0.91.

Statistical tool:

Descriptive statistics and correlation statistics were done using spss (version 16.0).

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TABLES AND RESULT

Table- 1 showing the difference in mean, standard deviation and 't' values between the male and female medical doctors of west bengal. (n=110, male=67, female=43).

variables	male		female		't' values	Level of significance
	mean	Standard deviation	mean	Standard deviation		
Job satisfaction	28	5.93	34.04	5.22	3.651	.001**
happiness	70.76	10.05	76.92	10.30	2.139	.038*
Sense of well being	47.60	3.80	51.64	5.64	2.968	.005**

**p<0.01, *p<0.05

Table- 2 Showing the product moment correlation coefficient values for the total group of male and female medical doctors of west bengal for level of happiness and sense of well being with the level of job satisfaction (n=110).

variables	Correlation coefficient
Job satisfaction - level of happiness	.215**
Job satisfaction – sense of well being	.047

**p<0.01, *p<0.05

DISCUSSION

The study focuses on the job satisfaction of medical doctors of West Bengal and it's relationship to their subjective sense of well being and level of happiness. The finding has been discussed in the light of the comparison between the male doctors and female doctors.

It has been found that there is a significant difference between the means of the two groups with respect to level of job satisfaction, subjective sense of well being and the level of happiness. On the basis of result we can say that female doctors are more satisfied with their jobs as compared to male doctors as the mean of the female employees found to be greater than that of the male employees and the similar result has revealed in case of level of happiness and subjective sense of well being. These kind of result may be due to gender equality prevails, gender-balanced management, work/life balance, family-friendly values and practices and maternity leave provided by the government. Gender differences In today's world, women are taking a more active role in their careers. There are women who lead large companies, own their own businesses, and are very active in their community and work as well.

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Happiness play a major role in the job satisfaction and it is a correlated factor to job satisfaction. If the employees are not happy in their personal life then they are not willing to be satisfied to their job. Dissatisfaction in work means they are not satisfied and in fact observations made here, reveal that employees appear to be satisfied as they are happy in their personal life.

The correlation between job satisfaction and subjective sense of well being has not been found to be significant. So it can be interpreted that the level of job satisfaction and the quality in subjective sense of well being are not associated with each other for the selected sample of the present study.

The findings reveal some, interesting trends regarding different facets of the doctors of West Bengal (male and female). The inter-group comparison between the male and female doctors have indicated significant difference with respect to measure of selected variables. However, the relationship between the variables has generated some interesting findings which throw some light upon the issue of job satisfaction among the employees of medical sector.

LIMITATION OF THE STUDY

1. Respondent's opinions are dynamic; they keep changing from time to time.
2. Some of the respondents might not have given the actual information due to fear of being disclosed.
3. The results are confined to only few of hospitals of west bengal and cannot be generalized for other state of India.
4. The study was conducted with the limited number of respondent due to time constraint.
5. Study may be obsolete because of changing environment and needs.
6. Satisfaction level to various factors may differ from person to person.
7. Medical doctors of private organization was not included in the present study.

SUGGESTION FOR THE FURTHER STUDY

This model also can be applied to more no of respondents including the other public and private sector medical organization of overall the country for measuring the gender difference in job satisfaction.

CONCLUSION

There does exist a significant difference between male and female medical doctors in accordance to level of job satisfaction, level of happiness and subjective sense of well being and furthermore female doctors are found to be more satisfied in their job than the male doctors of west bengal. Job satisfaction and level of happiness are significantly correlated with each other among the doctors of west Bengal.

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Conflict of Interests

The author declared no conflict of interests.

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Role of Psychoeducation on Self- Management of Type 1 Diabetes in Adolescents - A Review

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ABSTRACT

The efficacy of Psychoeducation for adolescents with type 1 diabetes mellitus has long been debated among mental health professionals. Psychoeducation is an effective intervention which aids in managing the mental health concerns of the adolescents along with the parameters of their illness such as insulin regimen, dietary and exercise discipline and need for autonomy as adolescence is a developmentally challenging period. The current paper reviews twofold objectives: first is to comprehend the relationship between psychosocial factors, Psychoeducation and type 1 diabetes. Second is to uncover the implications of Psychoeducation in health care practice. A review of 40 studies from 1991 to 2014 was carried out to understand the role of Psychoeducation in type 1 diabetes. The studies reviewed indicates a positive association between Psychoeducation, quality of life, reduction in disturbed eating pattern and management of their health condition.

Keywords: *Type 1 Diabetes, Psychoeducation*

Type 1 diabetes mellitus is a chronic medical condition that occurs when pancreas produces little or no insulin, requiring diligent blood sugar monitoring, lifestyle modifications, treatment and prevention of complications related to the disorder through introduction of Psychoeducation. Childhood is the usual age of onset but an individual can develop it at any age. The only treatment available at present is insulin which has to be injected in the body through injections, pump or pen.

Management of diabetes is a difficulty for adolescents since they are entangled in issues of exerting independence, developing self-concept, onset of puberty as puberty can be the causal factor for resistance of insulin (Anderson, Ho, Bracket, Finkelstein & Laffel, 1997). As diabetic

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adolescents require consistent monitoring, it increases the intensity of intrusiveness of the care-giver (Weinger, O'Donnel & Ritholz, 2001). adolescents may see their parents as limitations on food as efforts to control them and may regard the need to monitor diet and be conscientious about injections as rules and regulations imposed from outside which can lead to family conflict (Wysocki, 1993). Moreover, within the adolescent peer culture, those who are different are often stigmatized. Thus, the adolescent having diabetes may neglect appropriate care to avoid rejection. Emotionally stable and assiduous adolescents are more likely to follow the complex regimen requires by the demanding health condition compared to thosw who do not have these qualities (Skinner, Hampson & Fife-Shaw, 2002).

Children and adolescents are most of the time in school, involves in extra curricular activities or with friends wherein the monitoring of adults or peers is not always a constant process and neither do they prefer it due to the need to become independent which is a major characteristic of adolescence. Thus, they need to take the route of self-management by becoming aware of the myths and facts allied with diabetes and learn how to manage their condition on a routinely basis, how to handle emergency situations and how to lead an active life by keeping prospective complications at bay. Psychoeducation is an effective way through which knowledge and independence derived from knowledge can be wielded along with fulfilling the responsibility of self-management.

Psychoeducation is an effective integration of educational and psychotherapeutic interventions. It provides psychological support along with providing requires medical information. The strength of the Psychoeducation lies in the ability to focus on the present and on the drive of the receiver. Thus, Psychoeducation induces confidence of control of the disease and how it can be sustained with continuous management (Snoek et al., 1999). The aim of review is to explore the role of Psychoeducation in adherence of regimen, impact of psychosocial factors, optimal management of blood glucose level, mental health issues such as anxiety and depression and coping with the disorder.

OUTCOME OF PSYCHOEDUCATION IN DIABETES

Literatures concerning the current topic were reviewed for the current paper. 15% of the studies on Psychoeducation that have yielded remarkably significant value have been listed in the table below. The research design of these studies are randomly controlled design and assessments were done after 3,6,12,18 months interval: altering for all six mentioned studies. For these six studies, Psychoeducation program included educational awareness along with psychotherapy namely Cognitive Behaviour Therapy, Rational Emotive Therapy, problem solving and educational manager included internet programs designed for executive purpose. In all the research studies, Psychoeducation is based on the crux of making adolescents independent to manage their health condition. Also, therapeutic interventions included in psychotherapy have yielded positive results.

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In majority of the research studies retrieved, the focus is centred around cognitions, thoughts and problem solving but emphasis on emotional regulation is not laid. Into the bargain, the variables cyclically researched and assessed embrace coping, quality of life, diabetes distress, clinical correlates of diabetes, self-efficacy, family conflict, and regimen adherence. Thus, the variables researched reveal that cognition precedes emotions. Through reflection, the variables that can be hoisted to endow the adolescent with self-management skills can include peer acceptance/rejection/respect/adjustment; emotional support received from sibling/family/friends, motivation, emotional regulation, institutional responsibility corporal characteristics such as obesity, medical complications and choice of careers.

Authors	Year of Publishing	Significance Level	Factors
1. BM Sworen et al.,	2003	Annual rate of severe hypoglycaemia requiring parental therapy in the group receiving psychoeducation p=0.01 Annual hospital admission rate was lower in the control group p=0.04 Annual rate of emergency department visits in the control group was lower p=0.004	Hypoglycaemia Hospital admission Emergency department visits
2. Grey Margaret et al.,	2013	Lower HbA1c p=0.04 Higher Qol (P=0.02) Social Acceptance (P=0.01) Self- efficacy (P=0.03) Lower perceived stress (P=0.02) Diabetes family conflict (P=0.02)	HbA1c Quality of Life Coping Social-competence Self-management Family conflict

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Authors	Year of Publishing	Significance Level	Factors
3. Mulvaney A. Shelgauh et al.,	2009	Self-management (P=0.02) Improvement in problem solving (P=0.23) Consistency A1C(P=0.27)	Self-management Problem-solving HbA1c
4. EC Morelnad and associates	2004	Daily BGM frequency (p=0.02) Family involvement for diabetes management (p<0.001)	Glycemic control Family involvement Adherence to BGM
5. Snoek J.Frank and associates	1999	Average drop in worst control of HbA1c= >0.5% Improved positive well-being P <0.5% Decreased diabetes distress P <0.5	HbA1c Well –being Diabetes distress
6. Grey Margaret et al.,	2009	QOL impact p=0.02	Quality of life Metabolic control Coping Self-efficacy Family functioning
7. Zoysa et al.,	2014	Hypoglycemia awareness improved (P<0.001)	Hypoglycaemia

STUDY CHARACTERISTICS

A. Psychological morbidities in diabetic adolescents

Depression and anxiety disorders are most common diagnoses among people with diabetes and these conditions occur more often in patients than in the general population (Hood et al., 2006). Psychological feature such as diabetes and anxiety can complicate the management of diabetes. In a primary care population, major depression in diabetics was mainly associated with behaviours that had been initiated by the patient such as exercise, managing medication, diet but have now become difficult to maintain (Lin et al., 2004). Prevalence of depression in diabetic population is higher as compared to non-diabetic population. This has been demonstrated by

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Goldney and his associates in a study conducted in 2004, that prevalence in diabetic population was 24% comparative with non-diabetic population of 17%. In another review article by Anderson and his associates (2001) and Malhotra & Reddy (2013), the prevalence of depression is present in clinical samples to a greater degree as compared with non-clinical samples.

Clinically diagnosable eating disorders also appear to be more prevalent among people with diabetes than in general population; this association is especially strong in young women and it increases the risk of developing diabetes complications. Depression, anxiety and eating disorders can all be treated effectively but they tend to recur and may require repeated treatment. Eating disorder is correlated to irregular glycemic control, retinopathy and divergence between parent and child on the issue of food can hinder diabetes management (Lustman & Harris, 1998).

Quality of life increases with administration of skills program (Grey, Boland, Davidson, Li & Tamborlane, 2000). Grey and her colleagues reported that adolescents who practiced intensive diabetes management and received coping skill training had lower A1c levels, had more confidence in their ability to manage their diabetes and reported less impact of diabetes on their quality of life than adolescents who practiced intensive management but did not receive coping skill training.

In a study conducted by Grey et al., 2013, with 320 youth aged between 11-14 years, Psychoeducation was delivered in the form of two internet programs and after time span of 18 months, youth who had completed both the programs reported higher quality of life, lower perceived stress, lower diabetes related family conflict, increased social acceptance and self-efficacy compared to those who had completed only one program. Quality of life is adversely impacted by diabetes (Brown et al., 2004; Lustman et al., 2000; Gavard JA et al., 1993; Ciechanowski PS et al., 2000).

B. Non adherence in diabetes care

Non adherence can be notices in the structure of somber psychological problems such as eating disorder, anxiety, depression which can be further treated by psychotherapy (Lustman & Harris, 1998; MG Pereira, Cross-Berg, P Almeida, JC Machado, 2008). Adherence to managing diabetes is independent of gender (Pattino AM, Sanchez J, Edison M, Delamater AM, 2005; Naar-King S et al., 2006). Enhancement in adherence is optimistically correlated with variables such as coping, self-efficacy, family functioning and psychosocial modification metabolic organization (Graue, Wentzel-Larsen, Bru, Hanested & Sovik, 2004; Grey, Lipman, Cameron & Thurber, 1997; Giva, Myers & Newman, 2000).

C. Blood glucose

The optimal management of blood glucose is related to diabetes explicit family disagreement. Disappointment of not achieving most favourable management can lead to conflict and the

family's concern only with the blood glucose level increases the patient's anxiety (Williams, Laffell, Hood, 2009; Anderson et al, 2002; Hood, Butler, Anderson, Lafell, 2007; Lewin et al., 2006; Herge et al., 2012).

D. Coping with diabetes related distress

Grey and her colleagues reported that adolescents who practiced intensive diabetes management and received coping skills training had lower A1c levels, had more confidence in their ability to manage their diabetes and reported less impact of diabetes on their quality of life than adolescents who practiced intensive management but did not receive coping skill training. Wysocki and colleagues reported mixed results for families of adolescents who participated in a trial of behavioural family systems therapy (BFST).participants in this group had better parent-adolescent relationships but no improvement in adjustment to diabetes or glycemic control, compared with those receiving standard treatment.

In another controlled trail, Anderson and her colleagues provided separate group sessions for adolescents and their parents as a supplement to regular diabetes clinic visits. The goal of the sessions was to increase skill in using self-monitored blood glucose data for regimen adjustments. The goal of the parents session was to develop strategies for negotiating appropriate levels of parental involvement in the adolescents diabetes care. Eighteen months after completion of the 12 session group intervention, adolescents in the treatment group had significantly lower A1c levels and reported significant more use of SMBG data for selected regimen adjustments than adolescents in the control group. In some settings, coping skill training is incorporated into broader programmes of self-management education. In fact, the American Diabetes Association has stated that "Diabetes specific coping skills training (CST) is designed to help patients overcome barriers to the successful application of new knowledge and skills. This intervention is designed to improve patient's emotional well-being, diabetes self-care and long term blood glucose control. The CST approach used in this program is a psychoeducational group intervention that addresses attitudes and behaviours that underlie individual patterns of self-care". Thus, this leads to positive outcome (Davidson, Boland & Grey, 1997).

In a group setting, individuals begin the process of identifying their own personal regimen barriers or 'sticking points'. Patients are encouraged to identify sticking points as specifically as possible; the more expressly the sticking points are defined, the easier it is to resolve. Once a personal issue has been identified, patients help each other develop strategies for dealing with these issues, focusing on the approaches that have been successful in the past. A key goal of this process is to help patients recognize that certain thoughts or attitudes trigger distress and non-constructive behaviour, while erstwhile thoughts and outlook trigger a process that leads to better outcomes. In a study conducted by Whittemore R and his associates, diabetic adolescents having

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lower glycosylated haemoglobin and higher depressive symptoms are more likely to participate and benefit from the Psychoeducation program.

IMPLICATIONS

Though Psychoeducation is an effectual way to improve mental health by being educated about the disorder and receiving psychotherapy, there is a need to address other aspects associated with it rather than the cognitive component only; varied aspects include emotional adjustment, situational adjustments in the form of life events that can be overpowering, choice of professional careers. In addition, Psychoeducation can also be given to friends, peers, family, colleagues of the person affected with diabetes. Through this awareness among the public about health conditions will improve along with adjustment with the afflicted and for the afflicted. Hence, the requirement of a mental health expert for the purpose of managing chronic illness has developed.

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Conflict of Interests

The author declared no conflict of interests.

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Culture and Media

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ABSTRACT

In the present study a comparison between movies whose remake has been made in a different cultural context was selected. The movie selected for the purpose was Hollywood movie; Harry met sally and its Bollywood remake, Hum Tum. The cultural differences and similarities between the two movies were analysed through theory based content analysis. The differences were found in terms were in terms of values, norms, attitudes, situations, language, art, and literature, marriage, and relationships and similarities were found in context of importance the culture place on friends. The differences can be attributed to the reason that Bollywood filmmakers operate as cultural mediators and evaluates the appropriateness of a film according to their perception of the audience, and this Indianization continues to make a movie culturally adaptable. Every cinema reflects the culture of which it belongs, and a nation's cultural conventions, traditions, and expectations will affect the remake in significant ways. Thus, a movie is a common and important form of cultural expression.

Keywords: *Media, Cultural differences, Bollywood, Hollywood, Remix*

Media is the collective communication outlets or tools that are used to store and deliver information or data. It is either associated with communication media or the specialized communication businesses such as: print media and the press, photography, advertising, cinema, broadcasting (radio and television) and publishing. Whereas the mass media is a diversified collection of media technologies that reach a large audience via mass communication. The technologies through which this communication takes place include a variety of outlets (Adorno, 1991)

Broadcast media transmit information electronically, via such media as film, radio, recorded music, or television. Digital media comprises both Internet and mobile mass communication. Internet media comprise such services as email, social media sites, websites, and Internet-based radio and television. Outdoor media transmit information via such media as AR advertising; billboards; blimps; flying billboards; placards or kiosks placed inside and outside of buses,

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commercial buildings, shops, sports stadiums, subway cars, or trains; signs; or skywriting. Print media transmit information via physical objects, such as books, comics, magazines, newspapers, or pamphlets. Event organizing and public speaking can also be considered forms of mass media (Manohar, 2011)

PSYCHOLOGY AND MEDIA

Despite the disappearance of media psychologists from psychology over the last century, the influence of the media on everyday behaviour is so insidious that it has been impossible to dispel it completely. Indeed, its effect on social change has been so rapid that references to media phenomena now abound in psychological research, and their status as media phenomena is often completely ignored (Giles, 2003). Every decade in the last 50 years has seen major developments in mass communications and media.

According to Luskin, (2008), Media psychology is the branch of psychology that focuses on the relationships between human behaviour and the media. This branch is a relatively new field of study because of advancement in technology. Media psychology flows from the application of theories in psychology to media. Specifically included are the use of pictures, graphics and sound in all forms of new communications technology. Media psychology is the interface between media and the human response. Implications sometimes involve complex and unique legal and ethical challenges. One generally learns psychology one theory at a time and begins to combine and apply theories based on increasing insight. Media Psychology represents the convergence of psychology applied to media, technology, communication, and is an art and science.

Media psychology is concerned with a wide swath of human behavior, especially so in an increasingly media-dominated society. Media Psychology analyzes how media cover great or tragic moments that come to define a culture, such as the first walk on the moon or the last moments of a fallen president (Stuart Fischhoff, 2005)

More specifically, media psychology is concerned with the inter- and intra-personal psychological dimensions underlying the impact and use of any medium of communication, irrespective of the nature of the subject matter being communicated. In other words, media psychology is concerned with the social and psychological parameters of communications between people (or people and other organisms) that are mediated by some technology or conduit other than simply air. Disciplines are as much defined by what they exclude as what they embrace; by what they are not as much as what they are.

Media psychology bridges the gap by helping us better understand some of the implications of technological change. Researchers hypothesize, operationalize, and quantify the impact of media. Research in media psychology, however, is difficult; complicated by the fact that it's hard to realistically measure things that are so integrated in the fabric of everyday life. It's

extraordinarily tricky to separate out confounding variables in our complex world. Today, we are media consumers, producers and distributors and our choices have direct impact on what others produce for us to see.

MEDIA AND CULTURE

Culture is set of patterns of human activity within a community or social group and the symbolic structures that give such activity significance. Customs, laws, dress, architectural style, social standards, religious beliefs, and traditions are all examples of cultural elements. Cambridge English Dictionary states that culture is, the way of life, especially the general customs and beliefs, of a particular group of people at a particular time. Culture is the complex whole that consists of everything we think and do and have as members of society.(Bierstedt, 2003).

Culture is the total content of the physio-social, bio-social and psycho-social universe man has produced and the socially created mechanisms through which these social product operate (Anderson and Parker, 2000). Mlinowski defines culture as the handiwork of man and the medium through which he achieves his ends.

Following are the functions of culture:

1. Culture Defines Situations:

Each culture has many subtle cues which define each situation. It reveals whether one should prepare to fight, run, laugh or make love. For example, suppose someone approaches you with right hand outstretched at waist level. What does this mean? That he wishes to shake hands in friendly greeting is perfectly obvious – obvious, that is to anyone familiar with our culture.

But in another place or time the outstretched hand might mean hostility or warning. One does not know what to do in a situation until he has defined the situation. Each society has its insults and fighting words. The cues (hints) which define situations appear in infinite variety. A person who moves from one society into another will spend many years misreading the cues. For example, laughing at the wrong places.

2. Culture defines Attitudes, Values and Goals:

Each person learns in his culture what is good, true, and beautiful. Attitudes, values and goals are defined by the culture. While the individual normally learns them as unconsciously as he learns the language. Attitudes are tendencies to feel and act in certain ways. Values are measures of goodness or desirability, for example, we value private property, (representative) Government and many other things and experience.

Goals are those attainments which our values define as worthy, (e.g.) winning the race, gaining the affections of a particular girl, or becoming president of the firm. By approving certain goals

and ridiculing others, the culture channels individual ambitions. In these ways culture determines the goals of life.

3. Culture defines Myths, Legends, and the Supernatural:

Myths and legends are important part of every culture. They may inspire, reinforce effort and sacrifice and bring comfort in bereavement. Whether they are true is sociologically unimportant. Ghosts are real to people who believe in them and who act upon this belief. We cannot understand the behaviour of any group without knowing something of the myths, legends, and supernatural beliefs they hold. Myths and legends are powerful forces in a group's behaviour.

Culture also provides the individual with a ready-made view of the universe. The nature of divine power and the important moral issues are defined by the culture. The individual does not have to select, but is trained in a Christian, Buddhist, Hindu, Muslim or some other religious tradition. This tradition gives answers for the major (things imponderable) of life, and fortuities the individual to meet life's crises.

4. Culture provides Behavior Patterns:

If men use culture to advance their purposes, it seems clear also that a culture imposes limits on human and activities. The need for order calls forth another function of culture that of so directing behavior that disorderly behavior is restricted and orderly behavior is promoted. A society without rules or norms to define right and wrong behavior would be very much like a heavily travelled street without traffic signs or any understood rules for meeting and passing vehicles. Chaos would be the result in either case. Social order cannot rest on the assumption that men will spontaneously behave in ways conducive to social harmony.

The relationship between society, culture and personality is stressed by Ralph Linton: "A society is organized group of individuals. A culture is an organized group of learned responses. The individual is living organism capable of independent thought, feeling and action, but with his independence limited and all his resources profoundly modified by contact with the society and culture in which he develops. A society cannot exist apart from culture. A Society is always made of persons and their groupings. People carry and transmit culture, but they are not culture. No culture can exists except as it is embodied in a society of man; no society can operate without, cultural directives. Like matter and energy, like mind and body, they are interdependent and interacting yet express different aspects of the human situation.

Mass media is communication—whether written, broadcast, or spoken—that reaches a large audience. This includes television, radio, advertising, movies, the Internet, newspapers, magazines, and so forth. Mass media is a significant force in modern culture, particularly in America. Sociologists refer to this as a mediated culture where media reflects and creates the culture. Communities and individuals are bombarded constantly with messages from a multitude

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of sources including TV, billboards, and magazines, to name a few. These messages promote not only products, but moods, attitudes, and a sense of what is and is not important. Mass media makes possible the concept of celebrity: without the ability of movies, magazines, and news media to reach across thousands of miles, people could not become famous. Media is influenced by culture as much as the programming or stories that they are enveloped within. Media cannot escape the cultural influence. Culture provides media with sources for content. All contents are derived from culture including entertainment, news and advertisement. Media and culture are in correlation: Communication media are hand down values and norms of culture, culture hands down media contents (discourse). By the heavy use and great value which communication media are taking nowadays, culture and media can't be separated from each other. Our languages are our media. Our media are our metaphors. Our metaphors manage the contents of our culture.

The influence of culture on media can be seen in context of movies as well. Filmmakers have grown accustomed to tailoring their movies to foreign audiences even as they are being shot. Nudity is much more acceptable for general audiences in Europe than in the United States. Directors making films with nudity and strong sexual content often shoot two (or more) versions of some scenes. More extended and explicit scenes are edited into European versions, while shorter and less explicit scenes are used in the U.S. version. But even kids' movies may be altered to meet the unique needs of each market. The first Harry Potter book, for example, was titled *The Philosopher's Stone* in England but renamed *The Sorcerer's Stone* in the United States because the publisher thought the original title sounded a bit bland. When the movie was made, the titles were similarly customized for the two markets. And, because holidays vary from country to country, studios normally adjust a movie's opening date to fit local circumstances.

While it's tricky to predict which movies will work in specific foreign markets, some experts do think preference patterns exist. U.S. movies about racial or diversity issues (such as *Crash*) do not play well in foreign markets. Animated comedies like *Toy Story*, *Shrek*, and *Chicken Little* are almost universal in their appeal, but comedies based on social patterns or stereotypes may not travel as well. For instance, *Wedding Crashers* earned \$209 million in the United States but only \$75 million overseas. Action adventures with Tom Cruise and martial arts flicks starring Jackie Chan also do well in foreign countries, no doubt in part because the viewer does not have to have a firm grasp of the subtleties of the English language to follow the plot. Yet there are exceptions to this rule. *I Am Sam*, focused on the parental rights of the mentally challenged, did extremely well in markets like Japan and Korea—outselling action flicks like *The Bourne Identity*—because of its appeal to Asian females.

Cultural imperialism is the cultural aspects of imperialism. Imperialism, here, is referring to the creation and maintenance of unequal relationships between civilizations favouring the more powerful civilization. Therefore, it is the practice of promoting and imposing a culture, usually of politically powerful nations over less potent societies. It is the cultural hegemony of those

industrialized or economically influential countries, which determine general cultural values and standardize civilizations throughout the world. Many scholars employ the term, especially those in the fields of history, cultural studies, and postcolonial theory. The term is usually used in a pejorative sense, often in conjunction with a call to reject such influence.

Movie as a reflection of culture:

Movies have long been a mirror of our culture, reflecting the attitudes, morals and fashions of the times. The relationship between movies and culture involves a complicated dynamic; while movies certainly influence the mass culture that consumes them, they are also an integral part of that culture, a product of it, and therefore a reflection of prevailing concerns, attitudes, and beliefs. In considering the relationship between film and culture, it is important to keep in mind that, while certain ideologies may be prevalent in a given era, not only is American culture as diverse as the populations that form it, but it is also constantly changing from one period to the next. Mainstream films produced in the late 1940s and into the 1950s, for example, reflected the conservatism that dominated the sociopolitical arenas of the time. However, by the 1960s, a reactionary youth culture began to emerge in opposition to the dominant institutions, and these anti-establishment views soon found their way onto screen—a far cry from the attitudes most commonly represented only a few years earlier.

In one sense, movies could be characterized as storytellers. Not only do Hollywood films reflect certain commonly held attitudes and beliefs about what it means to be American, but they also portray contemporary trends, issues, and events, serving as records of the eras in which they were produced. Consider, for example, films about the September 11, 2001, terrorist attacks: *Fahrenheit 9/11*, *World Trade Center*, *United 93*, and others. These films grew out of a seminal event of the time, one that preoccupied the consciousness of Americans for years after it occurred.

Myths and Traditions

American identity in mass society is built around certain commonly held beliefs, or myths about shared experiences and these American myths are often disseminated through or reinforced by film. One example of a popular American myth, one that dates back to the writings of Thomas Jefferson and other founders, is an emphasis on individualism—a celebration of the common man or woman as a hero or reformer. With the rise of mass culture, the myth of the individual became increasingly appealing because it provided people with a sense of autonomy and individuality in the face of an increasingly homogenized culture. The hero myth finds embodiment in the Western, a film genre that was popular from the silent era through the 1960s, in which the lone cowboy, a semi nomadic wanderer makes his way in a lawless, and often dangerous, frontier. An example is 1952's *High Noon*. From 1926 until 1967, Westerns accounted for nearly a quarter of all films produced. In other films, like Frank Capra's 1946 movie *It's a Wonderful Life*, the individual triumphs by standing up to injustice, reinforcing the

belief that one person can make a difference in the world. And in more recent films, hero figures such as Indiana Jones, Luke Skywalker (*Star Wars*), and Neo (*The Matrix*) have continued to emphasize individualism.

Social Issues in Film

As D. W. Griffith recognized nearly a century ago, film has enormous power as a medium to influence public opinion. Ever since Griffith's *The Birth of a Nation* sparked strong public reactions in 1915, filmmakers have been producing movies that address social issues, sometimes subtly, and sometimes very directly. More recently, films like *Hotel Rwanda* (2004), about the 1994 Rwandan genocide, or *The Kite Runner* (2007), a story that takes place in the midst of a war-torn Afghanistan, have captured audience imaginations by telling stories that raise social awareness about world events. And a number of documentary films directed at social issues have had a strong influence on cultural attitudes and have brought about significant change.

Remakes and cross-cultural remakes

Cross-cultural exchanges have developed throughout the world for centuries. One aspect of cross-cultural exchange is the film remake – a film based on another film. The cinematic remaking of other films has a long history and cinemas around the world have continually remade other nations' films (Forrest and Koos, 2002). Every cinema reflects the culture of which it belongs, and a nation's cultural conventions, traditions, and expectations will affect the remake in significant ways. The remake is a common and important form of cultural borrowing and expression in a globalized world. According to Forrest and Koos, this is especially true in Hollywood where filmmakers have continually remade American films and "Americanized" foreign films. The remake is an important part of cinema and culture as it can give insight into aspects such as cultural differences, cinematic style, race and gender perceptions, and audience expectations. The cross-cultural remake is not only an American phenomenon. The national cinema of India, popularly known as Bollywood, has also been remaking and "Indianizing" Hollywood films for centuries.

A general definition of the film remake can be found in Forrest and Koos (2002), who describe the remake as a film derived from a previously made film. In addition, a remake is a film which has intertextual connections with an earlier film. The term is often used in reference to a film which uses an earlier film as the main source material, but many remakes will also make significant character, plot, and theme changes from the original. While intertextually related to an earlier film, the remake will therefore "differentiate itself in terms of variation and revision of different aspects."

Remakes not only include Hollywood remaking, but remakes across culture and media. Cross-cultural remakes are also found in many other countries around the world and Hollywood narratives have increasingly become the basis for foreign films, where filmmakers make over

U.S films in their own specific cultural and cinematic traditions. For Horton, this can be seen as an attempt to feel connected to a world film community and a way to tell the same story but with a different meaning, where the otherness of this meaning is what sets it apart. Horton and McDougal want to extend the definition of remakes to include films that take inspiration from, or only allude to, previous films, meaning cross-cultural remakes where cultural traditions, language, and narrative may differ greatly. McDougal uses the example of *Time of the Gypsies* (Kusturica, 1988), a remake that has placed the American Italian *The Godfather* (Coppola, 1972) into a gypsy cultural setting. There are therefore great possibilities for big changes when films are remade across culture, where the film is made over to reflect both personal and cultural interests.

This makeover does not suggest a direct adaptation, but a range of similarities as a remake includes a self-conscious balancing act between the familiar and the new. It can involve making significant changes to show the culture and national film traditions, with multiple cultural differences in terms of setting, themes, characters, gender, family, religion, and ending. For Forrest and Koos, cross-cultural film remaking is about cultural translation, translating the other, the foreign cultural references, into the known. It can be compared to free translations, being generally faithful to the spirit of the text, while adapting it to the aesthetic, moral, and cultural concerns of the target culture. A remake does not always show that it is a remake or that it has taken inspiration from a previous source. The main issue lies in the translation process, as culturally specific elements disappear or change in the remake while other specific parts are kept, and own culturally specific parts are added.

Research on cross-cultural remakes in India is limited. Still, there are a few theorists on this subject who draw upon previous theory, by accepting their usefulness but also seeing their limitations. Tejaswini Ganti explains how remakes are often labeled as ‘copies’ in India, and that many filmmakers see nothing wrong with copying film plots from Hollywood films, which have been sources of inspiration for decades. Ganti further explains how Indian filmmakers are searching out and “Indianizing” suitable Hollywood films to make them appropriate for India’s diverse cinema audience. Only certain films can be remade and thereby Indianized as they must contain certain elements in terms of plots, characterizations, thematic elements, melodrama, and moral values which are suitable for Bollywood and India, and which will be approved by the Indian viewers. The audience is very important in India, and they must be able to identify with the film they are watching. The Indian audience has had difficulty relating to Hollywood films in the past, so Hollywood has not been seen as a threat or as a competitive force, only as a source for usable stories. Filmmakers therefore choose and alter suitable Hollywood films in terms of narrative, dramatic, and aesthetic choices made by what they believe the audience will accept. After choosing a suitable film, the filmmaker can then add specific Indian elements to its plot and narrative.

Indianizing a film means adding the specific formula, film language, and cinematic elements of Bollywood. This process of Indianization generates culture effects, signifying the production of Indianess – against the other, the West, and Hollywood. For Ganti, this includes adding three central Hindi film “ingredients”. The first of these includes “adding emotion.” Hollywood is often seen as ‘dry’, but adding great and powerful emotions such as love, hate, revenge, and morals will make it more suitable in India. Another ingredient is “expanding the narrative.” This is done by adding a pre-story, subplots, parallel stories, flashbacks, and adding twists thereby developing complexity in the narrative. Hollywood is often more clear and has a straight forward narrative, while the audience in India on the other hand, expects to see ‘everything’ in one Bollywood film, including comedy, romance, drama, and action. The third basic ingredient is of course the “song and dance” sequences, as almost every Bollywood film must include at least 6-8 songs. These three basic ingredients thereby give greater narrative complexity and specificity to the film remake which necessarily have to be included in order for the film to be acceptable and relatable for the vast Indian and global audience and their expectations of Bollywood films. Ganti argues that Bollywood filmmakers operate as cultural mediators, evaluating the appropriateness of a film according to their perception of the audience, and this Indianization continues to be a conservative process as it stays the same and keeps the risks low.

Some of the many films that have been remade and thereby Indianized, are *Dead Poets Society* (Weir, 1989) into *Mohabbatein* (Chopra, 2000), *Three Men and a Baby* (1987) into *Heyy Babyy* (Khan, 2007), and *When Harry Met Sally* (Reiner, 1989) into *Hum Tum* (Kohli, 2004). Common for all these films is the adding of content, Indian morality, stronger emotions – in particular love, and the song and dance sequences, making them suitable for India, Bollywood, and its audience.

When dealing with cross-cultural remakes one is dealing with cultural adaptation, as one can analyse film remakes not only in their textual and structural specificity, but in a wider cultural context. The cultural analysis includes the filmic and cultural element changes accompanying this process of remaking from the American culture seen through Hollywood, with the culture of India presented through Bollywood cinema. The changes include adjusting the story to fit with the classical rules of the genre story-telling worked out in America, and the cinematic formula of Hindi Cinema.

The United States is a young, but powerful and global nation. It is also one of the most culturally diverse countries in the world, with a wide variety of peoples, religions, and beliefs with an emphasis on the individual. Hollywood is not able to reflect this but it remains the center of America’s popular culture, just as Bollywood in India. In *American Film and Society* since 1945, Leonard Quart and Albert Auster argue that film is a powerful and significant art form, and it can sometimes convey and imitate society, and capture and reveal something of the reality, the dreams, and the social issues that confront American society. Although social realism may not be

an important aesthetic in Hollywood, films have resonance for audiences because they can reinforce existing public fantasies and feelings. Films reach a mass audience with their cultural and social meaning. They were and are also often bound by formulas or institutional forces such as censorship and the star system which will affect the film, and the relationship between them and society therefore remains complex. Still, they argue that it is the underlying cultural patterns, not the individual artist that creates meaning in a film. Therefore it can be said that mainstream Hollywood film will reflect, and to a certain degree reveal and imitate, parts of U.S reality and also provide with great fantasy and adventure. It cannot reflect the variety and complexity of the United States and its culture, but it is still valued by its national and global audience.

On the other side of the globe, we find India and Bollywood. Here, Hindi commercial cinema has become part of everyday Indian life. Bollywood films do to some degree reflect the reality of the growing, urban middle class in India and in the Diaspora, but this is far removed from the rest of India. India is a diverse, multi-ethnic country with 4500 years of cultural history and a vast population of 1.2 billion people. The culture is therefore complex and varied, even more so than in the United States, with its diverse peoples, cultures, languages, religions, and traditions. India has also been heavily influenced by the West as a British colony and today, it has become more westernized by the growth of globalization and Americanization. The middle-class and urban life-style in India resembles in many ways that of the West, while rural life stays the same. While the U.S is centered on the individual, India is centered on the collective. Therefore, family is the most important social unit, where people live under a clear order of social precedence based on gender and age, where the senior male is the family head. Indian culture is therefore patriarchal, where female discrimination and arranged marriages are common. The high versus low culture that we find in Edensor and Hall is though not applicable in India, as films are cultural forms that are both seen as entertainment and art. Indian music, dance, and cinema play an integral role in the lives of the Indian population, which is very much reflected in film. The Hindi film caters to these denominators, and helps to create a homogenized culture on screen. Film is therefore an important part of culture, and will often imitate society on many different levels. They reflect and take up the issues on national identity, gender, caste, class, and wealth, as well as unpack the fantasy, hopes, and fears of the nation.

Tradition and westernization goes hand in hand in culture and in cinema. In this line between traditional culture and modernity, the 'old' hangs on the 'new' as change and continuity are parallel historical processes. Bollywood has in many ways a monopoly on Indian cultural life. In an ever changing society, many feel that the trip to the cinema provides them with an escape from reality. Bollywood films are therefore in many ways divorced from Indian society realism, though they still express cultural norms and Indian values. For many, the escapist entertainment of Bollywood films offers an escape from poverty to a dream world, forgetting their every-day life, while also showing important parts of life such as family, love, conflicts, and the battle over tradition versus modernity. Bollywood therefore affects Indian culture and the audience in

profound ways even today, and shows a constructed Indianess rooted in the reality and fantasies of India where the Masala film musical acts as a cultural unifier.

INDIANIZATION STRATEGIES

The re-working of foreign material for Hindi films has been approached by film and media scholars in mainly three ways. There are case studies of individual films that 'Indianize' foreign texts, such as Mazy Donaldson-Evans's article about Ketan Metha's *Madame Bovary* adaptation *Maya Memsaab* (1992), or Michael Lawrence's essay about *Do Phool* (Abdul Rashid Kardar, 1958), a film adaptation of Johanna Spyri's children's novel *Heidi*. A second strategy has emerged in the most recent texts about the phenomenon. They approach the Bollywood remake in the context of globalized cinema, identifying and analysing concrete textual changes but placing them in a larger context of transculturality. Iain Robert Smith, for example, does not try to identify national cultural reasons for the textual changes in Hindi remakes but examines *Zinda*, the unofficial Hindi version of South Korean film *Oldboy*, in terms of cultural exchange in the context of global media and geo-cultural flows (2013). He regards the film "less as an attempt to 'Indianize' the source text than as an attempt to create a Hollywood film which engages with the common stylistic and narrative tropes of the global horror genre" (2013) in order to reach beyond India.

Bollywood remakes and the notion of transcultural remakes

Every year more than 800 movies are produced in India and exported to China, East Asia and the whole Islamic world from Morocco to Indonesia. In recent years, some Indian films have even been shown in the cinematographic diaspora of Europe, Australia and the USA. The great success of Indian cinema can be traced back to an affinity for opulent dancing scenes, but also to the rigid censorship: kisses on the mouth, explicit sexuality and nudity are taboo. However, most notably, in the majority of cases the movies have a happy end. Up to now Western film critics have concentrated on the few socio-critical works of Indian directors, for instance the films *Salaam Bombay* (1988) or the current *Monsoon Wedding* by Mira Nair. This last film has been considered as the staging of the Indian conflict between tradition and modernity in the microcosm of a wedding party (Raweh 2002). In my opinion, popular Indian movies reflect social conflicts between tradition and modernity just as much as the above mentioned works, and furthermore they often include a strong utopian notion – the vision of conciliation and harmony between the antagonistic powers: Bollywood after all is not just a dream factory that belts out trashy material in the fashion of assembly line production. The potpourri despite itself, offers a glimpse of India's values, traditions, and contemporary events often in a unique formulaic package (Kahn & Debroy 2002, Kazmi 1999).

Remakes have always remained a fascinating subject among film critics and scholars. While few other art forms maintain their creative vigour and refreshing fascination when remade, film stands as the most popular expressive art form that creates original works through remakes and

adaptations. Such resilience and malleability are even more characteristic in trans-cultural film remakes, where filmic texts transcend social, cultural, geo-political, and linguistic borders. Film scholars have been so confounded and intrigued by the combination of repetition and innovation in the diptych of the original film and its transcultural remake that they habitually resort to figurative language and metaphors in their analyses of such pairs. For example, Anat Zanger, in his *Film Remakes as Ritual and Disguise: From Carmen to Ripley* (2007), touches upon the potential symbiosis between original and remake. Treating film remakes as products of a society's survival mechanism that both preserves and reconditions its own cultural meta-narrative, Zanger goes beyond apparent differences between originals and remakes to reveal a common typology along the vertical historical axis of cultural reproduction.

Cultural, religious and social identities have always been interrelated and leading topics in Indian cinema. From the start, Indian filmmakers realized the possibilities of voicing contemporary social and political concerns: Dhiren Ganguly attacked the Western way of life in his film *Bilet Pherat* aka *England Returned* of 1921 (Kahn & Debroy 2002). Raj Kapoor's film *Shri 420* of 1955 became famous for illustrating rising social and cultural conflicts in the early process of India's postcolonial modern times (Parasher 2002). Topics of identity and even fundamentalism in Indian movies have repeatedly been considered by Indian scholars (Chakravarty 1993, Mishra 2002), while the question of Indian identity in the diaspora confronted with Western modernity is a rather new perspective (Mishra 2002). Evidently Hindu rituals play a central role within the cinematic presentation of conflicts in recent films. Thus, focusing on rituals in popular Indian movies is not only a question of an unexplored issue in film analysis, but rather a highly significant aspect in the codified conflict of Hindu religion, Indian tradition and modernity, as Srivasta points out: The idea of an 'unified nation consisting of the construct of public ceremonies, symbols, institutions and discourses is of recent origin. It is paradoxical ... that traditions are used to justify the current social arrangements of a modern nation (Srivastava 2002).

One of the strategies employed by Hindi filmmakers to reduce the chances of box-office failure is to remake or adapt Hollywood, Telugu, Tamil, and older Hindi films. Bombay filmmakers regard box-office successes or "hits" in other Indian languages as attractive remake material because, having already succeeded with a set of audiences, such films are perceived as having a higher probability of succeeding with Hindi film audiences as well. Hollywood films, however, are not selected only on the basis of box-office outcome but are chosen for plots that seem novel and amenable to adaptation. Although remakes from other Indian languages resemble the original screenplay, adaptations of Hollywood films barely do because they have been transformed—or "Indianized," in industry parlance—to conform with the conventions of Hindi cinema.

Although Bombay filmmakers have been adapting Hollywood films for decades, the media landscape in which they operate has changed considerably since the entry of satellite and cable television in 1991, with the resulting increase in the number of television channels available locally, regionally, and nationally. Filmmakers explain that because they are competing with television for audiences they must create a cinematic experience extraordinary enough to seduce audiences away from their television sets at home and into theatres, and Hindi film production since the mid-1990s has been marked by vastly improved production values, increased spectacle, foreign locales, slick marketing, and subsequently higher costs. The presence of satellite channels such as Star Movies and TNT that broadcast feature films also means that some portion of the audience has access to the Hollywood films that are the sources for adaptations.

Unlike recent work on cinematic remakes (Horton and McDougal 1998) and cross-cultural adaptations (Horton 1998; Aufderheide 1998; Nayar 1997), which are primarily concerned with questions of narrative, genre, and intertextuality, Indianization can also be examined as not a relationship between texts but as a relationship between filmmakers and audiences. Much of the ethnographic research about the mass media has centred on television audiences and the moment of reception. However, as Ang (1991) and Dornfeld (1998) have argued, the idea of the audience must also be located in the production process. Whereas other scholars have examined Indianization with the purpose of delimiting what is uniquely “Indian” about the codes and conventions of mainstream Hindi cinema (Thomas 1985, 1995; Nayar 1997), Indianization can also be outlined as a practice that allows one to see how Hindi filmmakers think about and construct their audiences. Not every Hollywood film is capable of being “Indianized,” however, and as the opening anecdote indicates, sometimes after watching a particular film closely the director decides that the film is unsuitable for adaptation. Unlike other methods, an ethnographic focus on media production provides access to these “negative” instances or episodes in which films get rejected in the conceptualization stage. Such moments of inchoate production reveal how Hindi filmmakers operate as cultural mediators, evaluating the appropriateness for their audiences of stories, characterizations, and themes from certain Hollywood films. Hindi filmmakers frequently elaborate the difference between their films and Hollywood films in a language of constraints and compulsions as mediated through the figure of “the audience.” What becomes apparent during the processes of selection and adaptation is filmmakers’ ambivalence toward their audiences. Rather than “indigenizing” or domesticating difference (Tobin 1992), Indianization is a practice of constituting difference—between India and the West, and more important, between filmmakers and audiences.

Throughout the filmmaking process, Hindi filmmakers justify their narrative, dramatic, and aesthetic choices according to what they believe audiences will accept and reject. In the process of trying to produce a “hit,” filmmakers theorize about audiences’ motivations for seeing a film and how they derive pleasure from it. Rather than relying on any formal market research, their claims about audience tastes and preferences are based on a mix of intuition, observation of box-

office successes and failures, and first-hand viewing of films in theatres with audiences. Deciding which film is suitable for adaptation involves a complex amalgam of factors such as filmmakers' interpretations of films, their own film-viewing experiences, their assessment of a film's novelty, loyalty to the narrative conventions of Hindi cinema, and filmmakers' assumptions about their audiences.

Present study

The present study is a comparison between movies whose remake has been made in a different cultural context to study how movies are a reflection of culture. The movie selected for the purpose was Hollywood movie; *Harry met sally* and its Bollywood remake, *Hum tum*. The cultural differences in terms of values, norms, attitudes, situations, language, art, and literature, marriage, relationships and religion were analysed between these two movies.

Research question: Do movies reflect the culture where they are produced?

Objective:

- To understand the differences and similarities between a movie and its cross-cultural remake on the basis of culture.

METHOD

The method used to study the comparison between the movies was theory driven content analysis, *which use a subject-specific theory to inform their qualitative analysis*. Content analysis describes a family of analytic approaches ranging from impressionistic, intuitive, interpretive analyses to systematic, strict textual analyses (Rosengren, 1981). The specific type of content analysis approach chosen by a researcher varies with the theoretical and substantive interests of the researcher and the problem being studied (Weber, 1990). The differentiation of content analysis is usually limited to classifying it as primarily a qualitative versus quantitative research method. A more thorough analysis of the ways in which qualitative content analysis can be used would potentially illuminate key issues for researchers to consider in the design of studies purporting to use content analysis and the analytic procedures employed in such studies, thus avoiding a muddling of methods (Morse, 1991).

The primary drawback to content analysis is that context is usually not considered or is highly constrained, limiting the richness of the summary data produced. Thematic analysis, in contrast, is more involved and nuanced. Thematic analysis moves beyond counting explicit words or phrases and focuses on identifying and describing both implicit and explicit ideas. Codes developed for ideas or themes are then applied or linked to raw data as summary markers for later analysis, which may include comparing the relative frequencies of themes or topics within a data set, looking for code co-occurrence, or graphically displaying code relationships.

Both content and thematic analysis can be data-driven, as in grounded theory (Glaser and Strauss 1967, Kearney et al. 1994, Wright 1997), or theory-driven (Krippendorf 1980, Weber 1990). In a data-driven approach, the researcher carefully reads and rereads the data, looking for keywords, trends, themes, or ideas in the data that will help outline the analysis, before any analysis takes place. By contrast, a theory-driven approach is guided by specific ideas or hypotheses the researcher wants to assess. The researcher may still closely read the data prior to analysis, but his or her analysis categories have been determined a priori, without consideration of the data. Thus, theory driven content analysis was used as no previous themes were decided beforehand and the movies were analysed on the basis of cultural elements shown in both movies.

Data

Plot of movie Hum Tum and Harry met Sally

Hum Tum follows the encounters of the two main characters until they, after several years and various meetings, become friends and finally fall in love at the end of the movie. The comic characters Hum and Tum have their own animated sequences in the movie, where they represent the current state of Karan's and Rhea's relationship.

Harry and Sally first meet as they finish college in Chicago and spend 18 hours together in a car headed to New York. They don't quite hit off, particularly after Harry opines that a man and a woman can never be just friends because he'll always want to have sex with her. Over the next 10 years, they occasionally meet and soon do in fact become fast friends. They share the intimate details of their lives - hopes, dreams, failures and successes - and in the process also fall in love. It's not evident that will be able to sustain their relationship once they sleep together however.

SUMMARY OF THESE MOVIES

Hum Tum

Karan in the movie hum tum is the lead actor and is a cartoonist and a self-styled ladies' man. His daily comic, named "Hum Tum," explores the battle of stereotypical male/female behaviour. On a plane from Delhi to New York, he meets Rhea, the leading lady in the movie, who is represented by Rani Mukerji, who doesn't seem to be interested in him. They both agree to explore the city Amsterdam together. Karan quickly learns he has little in common with Rhea, but he doesn't give up his flirting and chance. He ends their contentious time together with an unwelcome kiss. Outraged, Rhea slaps him, and storms off, but Karan insists they'll meet again. After a few months he spots her in a park in New York, and she makes a scene with his girlfriend who turns out to be Rhea's childhood friend, which ends in their break-up.

Three years later, when Karan is helping his mother plan a wedding that turns out to be Rhea's. Rhea is marrying Sameer, represented by Abhishek Bachan. They bicker again, but this time, they part on good terms. Years later in when in Paris Karan is visiting his father, he runs into Rhea. He learns from Rhea's mother that Sameer has died in a car accident, and he sets out to help her reclaim her positive outlook on life. Karan returns to Mumbai, and three months later,

Rhea and her mother visit. Sensing that she needs to be with a strait-laced guy he conspires with Rhea's mother to fix her up with his shy best friend, Mihir. But eventually Mihir falls in love with a friend of Karan's, Diana and they get engaged. On the engagement night Rhea learns from drunk Diana about the conspiracy, and gets upset with Karan. Mihir makes Rhea realize hers and Karan's love for each other. That night Rhea and Karan consummate their relationship. Karan deems it a mistake and asks Rhea to marry him as he feels he took advantage of her, and that marriage will rectify the mistake. Rhea becomes upset, as she did not consider their actions a mistake; she realizes she loves him but tells Karan that they should not commit one more mistake by marrying for the wrong reasons. Rhea leaves him since Karan projects his confused feelings as guilt rather than as love for her. Karan realises his mistake, and goes out to find her. One year later Karan's cartoon Hum Tum becomes a hit and he writes a book about Hum and Tum. Basically the story is based on his love story with Rhea. Rhea reads that book and finds him in the press conference. Karan and Rhea reunite again. Karan admits his love for her, and they get married and have a baby girl.

When Harry met sally

Harry Burns and Sally Albright graduate together from the University of Chicago and share the drive to New York City, where Sally is beginning Journalism school and Harry is starting a career; at the time, Harry is dating a friend of Sally's, Amanda. During the drive, they discuss their differing ideas about relationships between men and women. Harry says that "Men and women can't be friends because the sex part always gets in the way". Sally disagrees, claiming that men and women can be strictly friends without sex. During a stop in a diner, Sally is angered when Harry tells her she is attractive; she accuses him of making a pass at her. In New York, because of their divergent philosophies, they part on unfriendly terms.

Five years later, they meet in a New York airport and find themselves on the same plane. Both are in relationships; Sally has just started dating a man named Joe, who turns out to be neighbour of Harry's and Harry is engaged to a woman named Helen, which surprises Sally. Harry suggests they become friends, forcing him to elaborate on his previous rule about the impossibility of male-female friendships. Despite Harry's suggestions of exceptions to that rule, they eventually separate, concluding that they will not be friends.

Harry and Sally run into each other again five years later, in a New York bookstore. They have coffee and talk about their previous relationships, both of which have ended, with Sally and Joe breaking up because she realized she wanted a family and he didn't want to get married, and Harry's because Helen fell in love with another man. After leaving the café, they take a walk and decide to be friends. In subsequent scenes, they have late-night phone conversations, go to dinner, and spend a lot of time together. Their dating experiences with others continue to highlight their different approaches to relationships and sex.

During a New Year's Eve party, Harry and Sally find themselves attracted to each other. Though they remain friends, they set each other up with their respective best friends, Marie and Jess. The four go to a restaurant, where Marie and Jess hit it off and later become engaged. One night, over the phone, Sally tearfully tells Harry that her ex is going to marry. He rushes to her apartment to comfort her, and they unexpectedly have sex, resulting in an awkward moment the next morning as Harry quickly leaves in a state of distress. This creates tension in their relationship. Their friendship cools for three weeks until the two have a heated argument during Jess and Marie's wedding dinner. Following this fight, Harry repeatedly attempts to mend his friendship with Sally, but she feels that they cannot be friends after what happened.

Then, at a New Year's Eve party that year, Sally feels alone without Harry by her side. Meanwhile, Harry is shown spending New Year's alone as he walks around the city. As she decides to leave the party early, Harry appears and declares his love for her. At first she argues that the only reason he is there is because he is lonely, but he disagrees and lists the many things he realized he loves about her. They make up and kiss, and in a short closing scene after that shows them being interviewed together, they say that they married three months after that night.

RESULT

Table1: The table shows the differences observed in the cultural context of these two movies.

Elements of culture/codes	Harry met sally	Hum Tum
Attitudes and values	When Rhea and Karan consummate their relationship, it is shown with the feelings of guilt.	In the movie Harry met Sally, when they unexpectedly have sex, creates tension in their relationship. But here the characters are not shown witnessing guilt.
Family	Family plays an important support system and play's major role in decision making. Here, Karan's phobia of being committed is also shown to be influenced by the separation of his mom and dad.	Family is not depicted in the movie
Songs and music	Songs were used to convey emotions, feelings and love.	No songs were used in the movie
Gender stereotyping	The songs used in the movie manifests stereotypical behaviour between the men and women. It is also shown through the cartoons	No stereotypical gender stereotyping was shown in the movie.

Culture and Media

Elements of culture/codes	Harry met sally	Hum Tum
	of Hum Tum, which gives stereotypical behaviour to girls and boys. When the two characters were showing drinking, these were again highlighted.	
Belief system	In the movie, It is shown that Rhea's husband has died and they both are shown becoming good friends. Divorce is shown not acceptable and the separation of Karan's parents is shown to negatively affect Karan's growth.	In Harry met Sally, when Harry and Sally run into each other again after five years it is shown that both had broken up their previous relationships. Divorce is shown acceptable.

Table 2: It shows the similarities observed in the two movies.

Elements of culture/codes	Harry met sally	Hum Tum
Friends	Both try to set each other against their friends, but both their friends end up dating each other.	The friend, Karan wanted to set Rhea with falls for his date, Diana.

DISCUSSION

Culture as a complex whole which includes knowledge, belief, art, morals, law, custom and any other capabilities and habits acquired by man as a member of society. Cambridge English Dictionary states that culture is, "the way of life, especially the general customs and beliefs, of a particular group of people at a particular time. Taylor (2005)

Popular culture influences the media to some extent, but the media influence popular culture as well. The media influence popular culture by helping to spread that culture around. People read about or see culture type things in the media and learn about them in that way. Culture also affects the media, though. The media has to adapt to what people are used to. We can see this in how the mainstream media has to react to what is being said on blogs and on websites and such. One aspect of cross-cultural exchange is the film remake – a film based on another film. The cinematic remaking of other films has a long history and cinemas around the world have continually remade other nations' films (Forrest and Koos, 2002). Every cinema reflects the culture of which it belongs, and a nation's cultural conventions, traditions, and expectations will affect the remake in significant ways. The remake is a common and important form of cultural borrowing and expression in a globalized world. For the present study, a comparison between

movies whose remake has been made in a different cultural context was selected. The movie selected for the purpose was Hollywood movie; Harry met Sally and its Bollywood remake, Hum Tum. The cultural differences in terms of values, norms, attitudes, situations, language, art, and literature, marriage, relationships and religion were analysed between these two movies.

Both Hum Tum and Harry met Sally follows the encounters of the two main characters until they, after several years and various meetings, become friends and finally fall in love at the end of the movie. In Harry and Sally the two main characters Harry and Sally, first meet as they finish college in Chicago and spend 18 hours together in a car headed to New York. They don't quite hit off, particularly after Harry opines that a man and a woman can never be just friends because he'll always want to have sex with her. Over the next 10 years, they occasionally meet and soon do in fact become fast friends. They share the intimate details of their lives - hopes, dreams, failures and successes - and in the process also fall in love. While Hum Tum follows the same pattern where the two main characters meet at different times and fight, become friends and ultimately fall in love. The portrayal of relationships between the characters in the film particularly that of the main lead, Karan and Riya, is handled with comedy and emotional drama. There are some similarities in the general concept of plot but both have pretty much own story which depends upon their different cultural contexts.

Attitudes, Values And Social Norms:

The differences in the movie can be attributed to different elements of culture. In both the movies eventually the characters are shown to fall in love but the endings are very different and can be seen in the context of prevailing cultural, religious and social norms. In the movie Hum Tum, the night when Rhea and Karan consummate their relationship, Karan deems it a mistake and asks Rhea to marry him as he feels he took advantage of her, and that marriage will rectify the mistake. In this sense marriage is seen as an important part of Indian culture and having sex before marriage seems to threaten the cultural norms. Rhea leaves him since Karan projects his confused feelings as guilt rather than as love for her. Karan realises his mistake, and goes out to find her. The movie ends when Karan admits his love for her, and they get married and have a baby girl. This can be seen as an Indianization technique where Hindi filmmakers think about and construct the movie according to what is acceptable to their audiences according to the prevailing norms and traditions.

While in the movie Harry met Sally, when they unexpectedly have sex, resulting in an awkward moment the next morning as Harry quickly leaves in a state of distress. This creates tension in their relationship. Their friendship cools for three weeks until the two have a heated argument during Jess and Marie's wedding dinner. Following this fight, Harry repeatedly attempts to mend his friendship with Sally, but she feels that they cannot be friends after what happened. Here, the characters were not shown as having guilt unlike in movie Hum Tum, rather were worried what the other person might be thinking as it happened during the course of 'friendship'. In the end

they make up and kiss, and in a short closing scene after that shows them being interviewed together, they say that they married three months after that night. The kissing scene is frequently shown in the Hollywood movie but is missing in the Hum Tum, also the feelings both couples go through and how they deal with it after consummating their relationship is different and can be attributed to the attitudes and values their respective cultures attach to it.

Family:

The second major difference can be seen is the values attach to relationships. In Harry met Sally, there is no mention of the characters family but in the movie Hum Tum, a collectivistic culture is being shown, where the presence of Rhea's mother and Karan's father and mother is used as an important part of story. As shown when Karan is visiting his father, he runs into Rhea. He learns from Rhea's mother that Sameer has died in a car accident, and he sets out to help her reclaim her positive outlook on life. This difference throws light on the attribution of Indian culture, which places a lot emphasis on family. A study done by Warson (2002) shows that Indians are part of collectivistic culture where the right of family, community and society supersedes that of individual. While US represents an individualistic pattern of culture where feelings of autonomy and interdependence are valued over harmony and interdependence.

Therefore, family is the most important social unit, where people live under a clear order of social precedence based on gender and age, where the senior male is the family head. Indian culture is therefore patriarchal, where arranged marriages are common. The high versus low culture that we find in Edensor and Hall is though not applicable in India, as films are cultural forms that are both seen as entertainment and art.

Belief system:

Another major difference between the two movies can be attributed to different belief system prevailing in their societies. In both the movies it is shown that the two characters meet on different occasions and time and evolve their relationship from bickering and fighting to friendship and then to love. In the movie Hum Tum, when the characters run into each other after few years in Paris, Karan learns that Rhea's husband has died and they both are shown becoming good friends. While in the movie Harry met Sally, when Harry and Sally run into each other again after five years in a New York bookstore. They both have coffee and learn about each other's previous relationships, both of which have ended, with Sally and Joe breaking up and Harry and Helen parting as Helen fell in love with another man. Both the movies are trying to show that after few years the two characters have met and developed friendship but in very different contexts. While in Hollywood movie a previous breakup shown of the two main characters falls within their belief system as dating is very common and acceptable there but when the filmmakers adapted it in Bollywood, they altered the breakup part by showing a previous marriage of the lady which evokes the sympathy of the guy as her husband has died. This can be attributed to the belief in India that marriage is sacrosanct and a taboo is placed on

divorce and breakup of a woman, so it is conveniently shown that she is single again as a result of death of her spouse.

Also, in the movie *Harry met Sally*, it is shown that Helen (Harry's wife) fell in love with another man and they divorced. In conservative countries, like India, **divorce** is still a taboo. Religious laws might make divorce far more complicated and harder to attain. Western nations in general have smoother legal systems when it comes to divorce. Again, US rank at the top of the West as it is a much more litigious society than most. All these reasons are a result why the two movies adapted different styles to suit their cultural audience.

Songs and Music:

It's not only the stories but the music which also exhibit cultural differences. In the Bollywood movie, the songs are integral part of Indian weddings, festivals or the parties. Not just in celebration but also in the lonely nights at rooftops with radio. Moreover, it was the films that spread fashion and cosmopolitan Bombay's trends to the towns and cities of India. So when *Harry met Sally* was adapted to suit Indian audiences, lot of music, wedding songs were added. Some of the many films that have been remade and thereby Indianized, are *Dead Poets Society* (Weir, 1989) into *Mohabbatein* (Chopra, 2000), and *Three Men and a Baby* (1987) into *HeyyBabyy* (Khan, 2007). Common for all these films is the adding of content, Indian morality, stronger emotions – in particular love, and the song and dance sequences, making them suitable for India, Bollywood, and its audience. Also, the songs in the movie *Hum Tum* goes on to promote the stereotypical behaviour of men and women.

Gender stereotyping:

The songs that were used in the movie *Hum Tum* reinforced the gender stereotypical behaviour between men and women. In the song: '*Na jaane kyon ladkiyan, ladkonsi nahi hoti*' which promotes social roles associated with women and men, where women are supposed to be fragile and seek protection, men are supposed to be one step ahead of women. It is conversation song between a girl and a boy who are trying to establish their supremacy over one another; it is a *ched-chaad* song. In another instance, when Karan gets to know that Rhea's husband has died, he tries to set her up with another 'decent' guy. This again is manifestation of stereotypical gender norms of Indian society, where a 'decent' guy is one who never hooks up other women. This can be attributed to the prevailing social norms and customs of the Indian society.

When dealing with cross-cultural remakes one is dealing with cultural adaptation, as one can analyse film remakes not only in their textual and structural specificity, but in a wider cultural context. The cultural analysis includes the filmic and cultural element changes accompanying this process of remaking from the American culture seen through Hollywood, with the culture of India presented through Bollywood cinema. The changes include adjusting the story to fit with

the classical rules of the genre story-telling worked out in America, and the cinematic formula of Hindi Cinema.

Similarities

In both the movies the role and presence of friends are shown. In the movie Hum tum, Karan conspires with Rhea's mother to fix her up with his shy best friend, Mihir. But eventually Mihir falls in love with a friend of Karan's, Diana and they get engaged. Similarly in the movie, Harry met sally, they set each other up with their respective best friends, Marie and Jess. The four go to a restaurant, where Marie and Jess hit it off and later become engaged. This similarity between the two movies can be attributed to the value attached with friends in both cultures. In collectivistic culture like India, friends play an important supportive role, therefore, it can be concluded that the filmmakers found it to be appropriate and retained it in Bollywood.

CONCLUSION

For the present study, a comparison between movies whose remake has been made in a different cultural context was selected. The movie selected for the purpose was Hollywood movie; Harry met sally and its Bollywood remake, Hum tum. The differences observed in the two movies can be attributed to existing cultural dynamics prevailing in these countries. These were analysed through theory based content analysis. Differences were found in the attitudes, values, stereotypes, music, food, belief system and cultural norms. Similarities were found in context of friends, which shows the value both cultures attach with them. It can be said that Bollywood filmmakers operate as cultural mediators, evaluating the appropriateness of a film according to their perception of the audience, and this Indianization continues to be a conservative process as it stays the same and keeps the risks low. Every cinema reflects the culture of which it belongs, and a nation's cultural conventions, traditions, and expectations will affect the remake in significant ways. Thus, a movie is a common and important form of cultural expression.

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Conflict of Interests

The author declared no conflict of interests.

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